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ABSTRACT

The purpose of a curriculum project was to identify selected areas in which modules needed to be c developed for Pennsylvania's vocational programs for the occupation of home-health assistant, and to develop a minimum of three modules for field testing. By reviewing current literature and information, the area of need for curriculum materials for the Home-Health Management Assistant Programs were defined. The three instructional modules were written according to a module format developed by the project staff in accordance with curriculum design principles accepted by the State Department of Home Economics Education. Areas covered by the modules included nutrition, nutrition for the elderly, and home nursing for the elderly. Following background information on the project, this report discusses the development of each module, including module format and module content. Major content consists of the project's three developed modules. Each module includes introductory information on use of the module and from three to four learning experiences. Each learning experience includes some or all of the following: concept, generalizations, terminal objective, instructional objective, learning activities, and information sheets. (BL)

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FINAL REPORT

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IDENTIFICATION AND DEVELOPMENT OF SELECTED MODULES FOR THE HOME HEALTH MANAGEMENT ASSISTANT PROGRAM

F. MARVIN HOLE

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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Pennsylvania Department of Education
Bureau of Vocational Education
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Identification and Development of Selected Modules for the Home Health Management Assistant Program (Project No. 14-7012)

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November 1977

Pennsylvania Department of Education
Bureau of Vocational Education
Research Coordinating Unit

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ABSTRACT

14-7012: Identification and development of selected modules for the Home Health Management Assistant Program.

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Purpose

The purpose of this curriculum project was to identify selected modules that needed development in the Home-Health Assistant Program and to develop a minimum of three modules for field testing.

By reviewing current literature and information, the area of need for curriculum materials for the Home-Health Management Assistant Programs were defined.

The three instructional modules were written according to a module format developed by the project staff in accordance with accepted curriculum design principles. The areas with which the three modules deal are:

1) Nutrition
2) Nutrition for the Elderly and
3) Home Nursing for the Elderly

These three modules are in addition to those already developed and not duplications of previous efforts.

The modules are now ready for field testing and, upon adjustment and revision, will be ready for use in the Home-Health Management Assistant Programs throughout the state.

Objectives

1. To provide three up-to-date modules for the Home-Health Assistant Program for field testing.

2. To provide continuity of effort for this program throughout Pennsylvania.

3. To strengthen the Home-Health Assistant Programs in Pennsylvania.

Outcomes

The research and development of the three modules produced over the duration of this project was undertaken late in the allocated project time period due to a series of Administrative delays. The project, whose funding was to be available on July 1, 1976, was not approved until October, 1976. The final written affirmation was not received by the Project Director until mid January, 1977. It was at this time (January 15, 1977) that actual research efforts were undertaken. Therefore, six months of allocated time was lost, equalling one-half of the total funded project time limit.

The Departments of Home Economics Education and Nutrition and Biological Sciences of The Pennsylvania State University were consulted in researching the three modules developed in an effort to provide up-to-date materials for students in the Home-Health Management Assistant Program as well as to insure materials selected were of the most fundamental areas of knowledge needed by these students. The Department of Home Economics Education provided specific assistance in the development of the physical format of these modules as well as advice concerning standards for well-structured curriculum design.

The designers of these modules:

1. Worked cooperatively with faculty and staff members and experts in the fields of nutrition, home economics and education to select three areas for which modules needed development (a module in "Nutrition," a module in "Nutrition of the Elderly" and a module in "Home Nursing for the Elderly.")

2. Identified skills and knowledges needed for each module through research.

3. Designed a format to be used in construction of modules for the Home-Health Management Assistant Programs.

Audience

The resulting modules are useful to Home-Health Assistant educators and curriculum planners in the health occupations fields.

Available Materials

- Final Report
- Module in Nutrition for the Home-Health Management Assistant
- Module in Nutrition for the elderly for the Home-Health Management Assistant
- Module in Home Nursing for the elderly for the Home-Health Management Assistant

CHAPTER I

Background of the Project

Introduction

There are only two or three Home-Health Management Assistant Programs presently in existence in the state of Pennsylvania. The importance of these programs is gaining awareness as the current need and future need for paraprofessionals trained in the area of health assistants employed in homes is becoming more and more evident.

Many more women today are employed outside the home and this number is continuing to grow. Since these women carried out the traditional task of managing health care in the home, the need for home assistants to assume these tasks is apparent and growing.

The legal implications and the growing concern for victims of child abuse and abuse of the elderly also makes the need for these Home-Health Management Assistants apparent.

Vocational education is primarily interested in developing citizens in all capacities so that they will be good members of the community and of the larger democracy of which they are a part. The chief purpose of vocational education is to fit individuals for gainful employment through the development of skills, knowledge, understanding, attitudes, work habits and appreciation.

A phase of vocational education is health occupations education. This phase provides:

1. Instruction of a preparatory type in the development of basic manipulative skills, communication skills, safety, judgment, technical knowledge, and related information for the purpose of fitting persons for gainful employment in health occupation pursuits and

2. Extension or supplemental instruction for the further development and upgrading of performance skills, technical knowledge, related information, safety, and job judgment for persons already employed in the health field.

There are several general programs provided under the heading of health occupations education. These programs will benefit pupils in high school, those who have dropped out of school and are unemployed, those who completed high school but seek specialized training and those who suffer from cultural and economic handicaps. Employed adults who want to upgrade their skills and technical knowledge are also benefitted by these programs.

The basic philosophy behind the Home-Health Management Assistant Program is consistent with the objectives of vocational education and, more specifically, with the objectives of health occupations education. This basic philosophy as described in "An Instruction Guide for Teachers of Home-Health Management Assistants" is:

> Recent changes in the health delivery system have indicated an increasing need to provide home care for the ill or convalescent individual, placing a burden upon the family. Adjustment in such situations can be facilitated by the employment of an individual able to meet the continuing needs of the family as well as to provide personal care to the ill or convalescent. The Home-Health Management Assistant course prepares an individual to adequately perform in both these areas. It is designed for teaching at the secondary or postsecondary level.

The Home-Health Management Assistant is a worker prepared to give personal care to convalescent, disabled or cronically ill persons of all ages. While these assistants are unlicensed, non-professional workers they are trained to provide home management assistance to either

individuals or families, their jobs may be compared with that job performed by a nursing assistant in an institution. The home-health management assistant is primarily involved with helping individuals in the home with personal care.

The purpose of the Home-Health Management Assistant Program is to provide vocational instruction for pupils who are preparing to become a substitute for a family member by providing services to keep the family together. Through their services in the care of the patient and the management of the home, the patient is enabled to remain in his or her own home. The advantages to convalescing in this way in regards to patient morale and family relations as well as economics are apparent. The Home-Health Management Assistant Programs give all levels of pupils an opportunity to build a foundational body of knowledge, to gain skill competencies and to develop acceptable attitudes to facilitate optimum home nursing care and to assist in performing the duties and tasks of the homemaker in an effort to keep family life as normal as possible in a situation where a family is overburdened by an illness or the stress of a family emergency.

The program normally may be completed in the span of one year. It includes classroom instruction and supervised, related clinical and practical experience.

A student enrolled in the Home-Health Management Assistant Program must be able to follow directions, communicate with personnel and perform under appropriate guidance and direction, however, mental abilities among students may vary and this variance is easily accommodated in the design of the program. The skills of the home-health management assistant

are varied and can be simplified. The trainee should be in good health because of the close contact with people and possible exposure to illness. Pupils engaged in clinical and/or practical experience must meet the specific requirements of the cooperating agency. While physical and mental abilities are important considerations, the student in the Home-Health Management Assistant Program must also possess a genuine interest in people, a sense of integrity, personal pride and a certain degree of maturity. The trainee must be neat in appearance and have pleasant manners and patience.

Need for the Study

While the Home-Health Management Assistant Program is in its second year of operation in selected schools in Pennsylvania, there is still a great need for improving instructional techniques for home-health management assistant teachers. To supply these teachers with materials to aid them in their classroom instruction, a need exists to develop a curriculum module format to be followed in developing modules to insure consistency in content components and organization. An initial set of modules is also needed. By establishing the structural format and a set of model modules, the production process for future instructional modules will be more easily organized and more efficiently carried out. The development of the module format and the model modules will provide leadership in developing curriculum materials for inclusion in and enhancement of the Home-Health Management Assistant Programs. Resources used and referred to in the modules will assist teachers in their search for resources to aid them in classroom instruction as well as provide references and sources for materials for future module development.

CHAPTER II

Module Format

One of the main objectives of this project was to establish a format for arranging module components to achieve consistency in module lay-out as well as to insure the inclusion of all necessary content areas. By defining and explaining each component of the module format, one may analyze the modules developed in this project with a clear notion of each component's purpose and objective. These definitions and explanations as well as the analysis of the three modules presented here will provide organization, direction and insight for future module developers.

Development of the Format

The format was developed by home economics educators with the assistance of the faculty of the Home Economics Education Department of The Pennsylvania State University. Current curriculum development guidelines and principles were employed in the design of this format in order to provide for optimum learning opportunities for the students of the Home-Health Management Assistant Program.

The Design of the Modular Format

Organization

Each module contains an introduction and three to four learning experiences. The learning experiences provide concepts, objectives and generalizations, resources and information sheets--in general, a major description of the content of each learning experience.

Concepts

Each module lists the specific concepts in each area with which the module deals. This information is designed to act as an advance organizer for students in preparation for study.

Overall Generalization

Each module contains one generalization representing the broad area dealt with throughout its contents. This generalization provides the student with the basic idea upon which study will be built.

Objectives

Each module contains three types or levels of objectives, educational objectives, terminal objectives and behavioral objectives.

1) The educational objectives are ones the student will accomplish after completing the entire module.

2) The terminal objectives are ones the student will achieve at the end of each learning experience.

3) The behavioral objectives are listed in each learning experience and are what the student must do to accomplish the educational and terminal objectives.

Procedure

Students demonstrating previously acquired competency in skills and knowledge provided may choose, with instructor's permission, to by-pass one or more learning experiences contained in the various modules. Should a student feel competent in all areas covered within a module, the student may choose to take the final examination to fulfill requirements for going on to the next module.

Resources

Each learning experience has a list of required resources in the lesson. At the end of each module there is a resource information sheet which supplies needed information enabling the teacher to supply the necessary resources for the unit. The reading level of each module has been determined using the Fog Index (Robert Brenning) and has been found to fall below the eighth grade level, allowing for easy comprehension by educationally disadvantaged students. The diversity of resources for learning provides a wide range of learning activities for the student, providing for maximum transmission of information to all students in accordance with various individual learning needs.

Feedback

At the end of each learning experience a "learning activity" allows students to test their understanding of material presented. Learning activities include conventional evaluative measures, such as multiple choice, true and false and essay questions about material contained in the information sheets as well as application exercises and hands-on practical activities dealing with the areas and topics discussed. These learning activities, combined with the resources provided in addition to the information sheets, allow students to experience a wide range of learning opportunities, thus optimizing the degree of learning and comprehension taking place. Answers and/or directory references are available to teachers for each learning activity at the end of each module.

CHAPTER III

Module Contents

The areas dealt with in the modules developed were chosen with the philosophies, objectives and needs of the health occupations programs and, specifically, the Home-Health Management Assistant Program in mind.

Since students in these areas are being trained to perform skills particularly for the convalescent, disabled or chronically ill person in the home, a firm grasp on the basics of nutrition was felt to be a beneficial area of study. Because the patients cared for in the home are very often elderly, the application of these nutrition principles to the care of the elderly in the home was also chosen as a sequel to the first module. While it is suggested that in actual classroom use the first module in nutrition precede the module concerning nutrition for the elderly, it should be remembered that these modules are written to function as separate instructional packets. Therefore, any may be used as a single learning activity or may be coupled with one or more other modules to form a unit. The third module, "Home Nursing for the Elderly", was intended to introduce fundamental concepts in home nursing to the student and apply the concepts, again, to the large population served by the home-health management assistants, the elderly.

A Module in Nutrition

The prerequisites for this module are familiarity with some basic concepts of nutrition, specifically, the role food plays in daily living, nutrients and their food sources and basic food groups and their

food sources. The overall objectives of this module are for the student to be able to:

- understand the fundamental principles of nutrition.
- apply the principles of nutrition to menu planning.

The terminal objective of Learning Experience #1 is for the student to be able to comprehend the relationship between food intake and health on the well-being of an individual. Information concerning the body's nutritional needs is provided and key concepts, such as digestion, absorption and metabolism are defined.

Learning Experience #2 is designed to enable the student to understand the nutrients, their functions and food sources.

The information sheet provides material on the six major catagories into which nutrients fall. The functions of each nutrient are described and food sources of these nutrients are listed. This information is summarized in chart form as an aid to student understanding and retention. This chart also describes various deficiency diseases resulting from the lack of adequate nutrient intake, which provides the student with further insight into the importance of sound nutritional pracitces.

Learning Experience #3 defines the terminal objective as enabling the student to incorporate the Recommended Daily Allowances of nutrients in menu planning. An explanation of the RDA's and their application to the construction of menus is provided in the information sheet. Differentiation is made between MDR's and RDA's and the Food and Nutrition Board of the National Academy of Sciences - National Research Council Recommended Dietary Allowances for a variety of age levels is provided.

Comprehension of the basic principle's of meal planning using the Basic Four Food Groups is the terminal objective of Learning Experience #4. Each of the four groups is discussed separately in the information sheet.

A Module in the Nutrition of the Elderly

The prerequisite for this module is a basic understanding of nutrition and the elderly, specifically food in relation to good health, problems resulting from poor diets and the rewards of working with the elderly. The objectives of this module are to enable students to:

- understand the fundamental concepts of nutrition for the elderly.
- apply the principles of nutrition to menu planning for the elderly.

The terminal objective of Learning Experience #1 is to enable the student to comprehend the relationship of food selection to the health and well-being of the elderly. The information sheet provides some foundational materials concerning the elderly including "The Senior Citizen's Bill of Rights". This information allows the student to develop an understanding of the elderly as a group and gain insight into their situation and needs. Nutritional requirements, including the specific requirements of each of the Basic Four Groups and other requirements, such as fiber, water, vitamins and minerals are also discussed. Physiological changes, social, ethnic and economic factors and special diet considerations are also described.

Learning Experience #2 deals with meal planning for the elderly and provides the student with the ability to comprehend the various factors that must be considered when planning menus for the elderly. The information sheet lists seven specific problems the elderly face in regards to meal preparation. They are: (1) inaccessibility to market, (2) high cost of food, (3) lack of kitchen equipment, (4) packages too large, (5) lack of appetite, (6) too much bother to cook or

clean-up and (7) eating alone. Some possible solutions to some of these problems which the home-health management assistant may employ are provided, including menu patterns, planning ahead, and wise practices.

Food Preferences is the main topic discussed in Learning Experience #3, with the terminal objective being to enable the student to incorporate an elderly person's food habits into a menu plan. The information sheet discusses food preferences of the elderly and emphasizes the importance of considering the likes and dislikes of the individual person in meal planning. The implications of the physiological changes of age on food selections and menu design is also discussed.

A Module in Home Nursing for the Elderly

The objectives of this module are to enable the student to:

- recognize the basic health and personality needs of the elderly patients in the home.
- apply basic concepts and techniques of medical care to elderly individuals in the home.
- apply concepts and techniques of patient care to satisfy elderly patient's psychological needs in the home situation.

The basic needs of the elderly are discussed in Learning Experience #1. The terminal objective of this experience is to enable students to recognize the basic needs of the elderly patient and apply basic care procedures to help satisfy these needs. Basic needs, including physical needs, safety needs, security needs and the need for self-esteem are discussed in the information sheet and particular emphasis is placed on the unique types of needs the elderly have in each of these categories. The material also provides explanations for this uniqueness and some broad general methods the home-health management assistant can use to help satisfy these needs. Emphasis is also placed on the important role the home-health management assistant can play in caring for the elderly in the home, thus providing students with a sense of pride in a worthwhile task.

Learning Experience #2 deals with general care of the elderly, particularly understanding the needs for and methods of keeping the personal care and appearance practices as normal as possible in the care of the elderly at home, which is this unit's terminal objective.

Information provided deals with methods of assisting elderly patients in the care of their mouth and teeth and face, hands and hair.

Emphasis is placed on caring for the patient confined to the bed. Procedures for giving a backrub are also provided. Throughout the lesson students are reminded that these methods of patient care not only satisfy physical needs but also work to develop a caring relationship between the home-health management assistant and the elderly person.

Feeding the patient is discussed in Learning Experience #3. The terminal objective is to enable students to determine foods appetizing to an elderly patient and serve them in an attractive way so as to encourage them to eat. Special diets and balanced meals are also discussed.

Preparation of the meal tray is discussed as are techniques and principles of serving food attractively. Stress is placed on preparing foods for the particular patient involved, according to his or her likes and needs. Preparation of the elderly person for meals is also discussed and the instructions for constructing a cardboard backrest are provided.

Learning Experience #4's terminal objective is to enable the student to understand and apply the basic principles of body mechanics to home nursing practices and patient care. While body mechanics techniques are important to home nursing practices, the student will benefit in all areas of Home-Health Management Assistant work by employing these methods. Information included in the information sheet deals with defining the term "body mechanics" and explaining its importance. A list of guidelines in body mechanics techniques are provided. Students are also encouraged to pass these concepts on to their patients as part of their nursing care as a preventative medicine practice.

Upon appropriate request, the Nutrition Information and Resource Center of The Pennsylvania State University provides a guide to libraries and clearing houses which offer information on nutrition education materials.

I. The Nutrition Information and Resource Center
Beecher-Dock House
The Pennsylvania State University Telephone: 814-865-1751 or
University Park, PA 16802 865-6323

This center was recently established under the Nutrition Education Grant to the Nutrition Program, College of Human Development at Penn State University, provided by the Heinz Endowment and given through the Nutrition Foundation. It is a working collection of nutrition education materials, staffed by nutritionists.

Special Service Features

1. Makes its services available to teachers, university faculty and students, professionals in other agencies, and the public-at-large.

2. Receives requests by letter, phone, or personal-on-site visits for help in identifying and selecting reliable nutrition information and educational materials.

3. Assists client in making arrangements, if needed, to secure by loan or purchase nutrition education materials.

4. Provides consultation to those planning a nutrition education exhibit, learning center, etc.

5. Provides referral to other professional and agencies when appropriate.

II. The Food and Nutrition Information and Educational Materials Center (FNIC)
The National Agricultural Library - Rm. 304
Beltsville, MD 20705 Telephone: 301-344-3719

This center was established to select, collect, maintain, and lend resource materials for use in training school food service personnel and by the nutrition education community. The FNIC collection includes

both print and non-print materials related to food service and nutrition. Print materials include books, journal articles, pamphlets, government documents, special reports, proceedings, bibliographies, etc. Types of non-print materials maintained are films, filmstrips, slides, games, charts, audiotapes and video cassettes.

Special Service Features

1. Maintains this collection and lends primarily to the following groups:

   a. Employees of the Food and Nutrition Service, USDA
   b. State School Food Service Directors and Staff
   c. County, City or District School Food Service Personnel
   d. Colleges and Universities offering courses applicable to school food service training
   e. Professional societies and research institutions involved in school food service and related subject areas
   f. Selected libraries with which FNIC shares reciprocal arrangements

2. Accepts requests by mail, telephone, or personal-on-site visits

3. Loans materials gratis

   a. Print materials for one month
   b. Non-print materials for two weeks (No more than three non-print media loaned at any one time to one person; films cannot be scheduled more than one month in advance.)

4. Makes available a catalog of the FNIC collection

   a. Materials are indexed according to specialized vocabulary,
   b. Materials are abstracted, extracted, or annotated to provide descriptive information including intended audience.

5. Makes available a separate catalog, "Audiovisual Guide to the Catalog of the FNIC"

6. Issues from time to time Cumulative Indexes to update and supplement the Catalog.

7. Maintains a 24-hour telephone monitor, regular office hours are 8-5, M-F.

III. The National Nutrition Education Clearing House (NNECH)
2140 Shattuck Avenue, Suite 1110
Berkeley, CA 95704 Telephone: 415-548-1363

This is a service of the Society for Nutrition Education which provides reference to nutrition education materials (print and non-print) judged by qualified nutritionists to contain accurate information. Special services such as preparation of bibliographies, selection and abstraction of materials, administration of nutrition education questionnaires, etc: can be contracted through the NNECH staff.

NNECH is not a lending library. Reference lists and bibliographies prepared by the staff are offered at modest cost.

Special Service Features

1. Provides extensive annotated bibliographies on such topics as food habits, method and kinds of nutrition education, and nutrition education and Spanish-speaking Americans.

2. Provides selected teaching/counseling materials and background references lists for nutrition educators. Print and non-print materials as well as selected journal articles are included.

   a. Subject matter is described by key words
   b. Publication date, cost, and ordering information are given for each item

3. Provides two leaflets (one for the professional and one, the layman) listing reliable nutrition resources.

IV. The Office of Education and Public Affairs
The Nutrition Foundation, Inc.
888 Seventeenth Street, N.W.
Washington, D.C. 20006 Telephone: 202-872-0778

This foundation, created and supported by leading companies in the food and allied industries, is a public, non-profit institution. The Foundation is dedicated to the advancement of nutrition knowledge and to its effective application in improving the health and welfare of mankind.

Special Service Features

1. Produces The Nutrition Foundation Index to Nutrition Education Materials which lists entries according to Source, Subject Matter, Readership Level, Audiovisual Materials, and Alphabetical Order by Title (including pertinent information about the publications); addresses of additional sources of nutrition education materials, information or personal contacts. (NOTE: Materials have not been evaluated for content and are not necessarily recommended by the Nutrition Foundation.) Cost of $5.00/copy is below cost of production.

2. Produces other nutrition education materials on various topics and makes available a catalog listing and order sheet for these items. Cost is modest.

3. Produces Nutrition Reviews, a recognized publication used widely by nutritionists.

These services may be used in the future development of additional modules in any area pertaining to nutrition (such as nutrition for children or nutrition and pregnancy).

CHAPTER IV

Conclusions and Recommendations

Conclusions

The three modules, A Module in Nutrition, A Module in Nutrition for the Elderly and A Module in Home Nursing for the Elderly, are complete and ready for pre-testing in the Home-Health Assistant Program. Due to the administrative delays discussed in the Outcomes of this report, the pre-testing phase of the development of these modules has not yet been completed. Once this phase is accomplished, these three modules will be ready for field testing in Home-Health Management Assistant Programs in Pennsylvania and, upon evaluation and revision, available for distribution in all Home-Health Assistant Programs in the state.

The three modules developed are appropriate vehicles to the attainment of the designated course objectives, as stated in An Instruction Guide for Teachers of Home Health Management Assistants, prepared by the Pennsylvania State University, Department of Vocational Education in conjunction with the Pennsylvania Dept. of Education Bureau of Vocational Education. Specifically, the following objectives may be achieved through the use of these modules.

Course Objectives Fulfilled by Modules

1. Demonstrate skill in performing simple nursing tasks commensurate with his or her responsibilities and limitations

2. Demonstrate knowledge and understanding of the basic principles or functions underlying procedures for patient care in the home

3. Be empathetic, tolerant and understanding of others within all age groups

4. Provide services which maintain family stability

5. Assist in all aspects of care and management of the home

6. Be aware of their own self-concept and recognize the interactions of people

7. Be aware of the opportunities for flexibility and creativity in health and home economics

These three modules are also supportive and in congruence with the basic Philosophy of the Home-Health Management Assistant, also set down in An Instruction Guide for Teachers of Home-Health Management Assistants.

"Recent changes in the health delivery system have indicated an increasing need to provide home care for the ill or convalescent individual, placing a burden upon the family. Adjustment in such situations can be facilitated by the employment of an individual able to meet the continuing needs of the family as well as to provide personal care to the ill or convalescent. The Home-Health Management Assistant course prepares an individual to adequately perform both these areas."

Recommendations

The objectives of the project have been achieved. One of the most important objectives set down was to provide leadership in developing curriculum modules for inclusion in the Home-Health Management Assistant Program. Modules and organizational tools have been developed in this project which will make future efforts in developing modules in other areas of this branch of health occupations education much easier. The need for more instructional materials still exists and continued efforts

to satisfy these needs with additional module development is apparent.

The need for increasing the number of students completing the Home-Health Management Program and able to serve the community with competency and skill is growing. The development of additional instructional modules for this program will facilitate the home-health management assistant student's learning in a most efficient way, thus contributing to the satisfaction of this need.

The instructors of the programs also have a need which additional modules may help to satisfy by providing consistent, organized instructional materials and information for obtaining future references and information. The teacher's tasks will increase in organization and efficiency and they will better be able to instruct their students.

The additional development of more modules will also greatly aid the student. Students enrolled in the Home-Health Management Assistant Programs come from diverse backgrounds. High school students, those who have dropped out of high school and are unemployed, those who have completed high school but seek specialized training, those who suffer from cultural and economic handicaps, or employed adults who seek to upgrade their skills and technical knowledge are enrolled. It is apparent that the needs of these learners vary and the learning opportunities should be as individualized as possible to accommodate these variances. The instructional modules are a sound teaching method which facilitates individualized learning. The level of learning ability taxed by the module is flexible, being adjusted using additional readings and activities in relationship to a particular learner's capabilities.

It is, therefore, suggested that the development of modules for the Home-Health Management Assistant Program continue, with areas of content correlating to the needs of society, the teachers and the students, both for the present and for the future.

APPENDIX A

A Module in Nutrition

A MODULE IN NUTRITION

Designed for

The Home-Health Management Assistant

By

Jane B. Berkey

Pennsylvania Department of Education
Bureau of Vocational Education
(Project No. 14-7012)

PREREQUISITE: To complete this module, you will have to be familiar with some basic concepts of nutrition, such as:

- Role food plays in daily living
- Nutrients and their food sources
- Basic food groups and their food sources

If you feel you are weak in the basic concepts of these particular areas, review the following material before proceeding:

- film: Nutritional Needs of Your Body
- filmstrip: How Food Effects You

If you have acquired the prerequisite competencies in some manner other than completing the above material, check with your teacher to see if any part of the material can be eliminated.

Objectives of this Module:

According to the criteria discussed in this module the student will:

- Understand the fundamental principles of nutrition
- Application of the principlesof nutrition to menu planning

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INTRODUCTION

Food plays a vital role in good health. Along with exercise and good health patterns, food in the appropriate amounts and types can promote a state of general well being for people of all ages.

As a Home-Health Management Assistant, the student must be aware of some of the basic principles of nutrition. They should be aware of the nutrient requirements for various ages of persons, the poor and good food sources of the nutrients, and the basic four food groups used in planning balanced meals. Since this is a dominant part of the Home-Health Management Assistant curriculum, the student should be competent in these areas of nutrition.

The learning experiences in this module are designed to help you develop competency in planning well balanced meals for people of all ages.

Module Structure and Use

ORGANIZATION: This module contains an introduction and four sequential learning experiences. The learning experiences provide concepts, objectives, and generalizations, resources and information sheets. They provide the major descriptions of what each learning experience entails.

The first learning experience is designed to provide the needed background information. The rest of the learning experiences apply the basic concepts of nutrition into the other areas of menu planning. By the time the final learning experience is completed, you should be able to apply the knowledge in your clinical experience in a real home setting.

CONCEPTS: This module will cover the following concepts of nutrition.

- Food sustains life
- Food contains a variety of nutrients which each performs a different function
- The Recommended Dietary Allowances
- The Basic Four Food Groups

OVERALL GENERALIZATION: Nutrition, as an environmental factor, is related to a person's health, longevity and general well-being.

OBJECTIVES: This module contains three objectives. An "educational objective," a terminal objective, and a behavioral objective.

The Educational Objectives are ones the student will accomplish after completing this entire module. They are:

- Understand the fundamental principles of nutrition
- Apply the principles of nutrition to menu planning

The Terminal Objectives are one the student will achieve at the end of each learning experience. They are:

- Comprehension of the relationship between food intake and helath and well-being of an individual
- Understanding of the nutrients, their functions, and food sources

- Interpolate the Recommended Dietary Allowances in menu planning
- Comprehend the basic principles of meal planning using the Basic Four Food Groups

The Behavioral Objectives--each learning experience has its separate behavioral objectives. They are listed in each learning experience, and are what the student must do to accomplish the Educational and Terminal Objectives.

PROCEDURE: After reading the Introduction on page 1 and the objectives, you should be able to determine how much of this module you must complete in order to go on to the next module.

1. If you have the necessary background knowledge required and feel you can go on, you can skip Learning Experience #1.
2. If you have had background information on Basic Four Recommended Dietary Allowances and major nutrients, you can skip lession 3, 4, and 5.
3. Instead, with the approval of your teacher, you can choose to go directly to the final exam and fulfill the requirements to go on to next module.
4. You may wish to look over the four learning experiences to see what is expected. This will help you decide the experiences you need.

RESOURCES: Each learning experience has a list of required learning resources in the lesson. At the end of the module there is a resource information sheet which supplies needed information that enables the teacher to supply the necessary resources for this unit.

Required Resource Equipment:

8mm movie projector
film loop
tape recorder
projector screen
over-head, transparency projector

LEARNING EXPERIENCE #1

CONCEPT: Food sustains life

GENERALIZATIONS:

- Adequate nutrition is essential for optimum health
- The body is equipped to digest, absorb and utilize nutrients from foods
- The body requires food energy and nutrients to carry on its vital functions, to build new cells, for growth and repair, and to supply energy for physical activities.

TERMINAL OBJECTIVE: Comprehension of the relationship between food intake and health and well-being of an individual.

INSTRUCTIONAL OBJECTIVE:

- Explain the terms of nutrition
- Explain the function of food
- State the importance of food to the body processes
- Describe the relationship between food functions and optimum health

LEARNING ACTIVITY: Before starting the module take the Nutrition Quickie Quiz to see how much you already know about nutrition. You will read the information sheet on "Body's Nutritional Needs" p. 4 to 6 and:

Study pamphlet: The Wonder of You.

Study: The Food for Thought (charts) and review the student leaflet.

Listen to video cassette: Fuel for Life.

OPTIONAL ACTIVITY: You may wish to read:

Pamphlet: "Can Food Make the Difference?"

ENDING ACTIVITY: Demonstrate knowledge of the basic concepts of nutrition by completing the self-test on page 8.

FEEDBACK: Compare your answers on your self-test with the model answers obtained from your teacher. Your teacher will evaluate your test and determine if you can go on to Learning Experience #2.

INFORMATION SHEET ON BODY'S NUTRITIONAL NEEDS

In the beginning, man, like most of the creatures on earth, spent most of his time searching for food. To him food meant only one thing, survival. We have come a long way since then, but it is still necessary for survival. Prehistoric man knew only he needed food to live, but not why it was necessary. Nutrition has over the years, developed into a science, one which enables us to study food and see why and how certain foods affect the body.

Different people may eat different kinds of food, but everyone in the world needs the same chemical ingredients in his food. There are the six main nutrients which we will go into more detail later. They are water, fat, carbohydrate, proteins, minerals, and vitamins. These nutrients are found in many foods, but no one food has them all. This is why people must eat a variety of foods no matter where they live.

To better understand what nutrition is, lets look again at its definition. Nutrition is a science of food, how it is used by the body, and how it affects health. Nutrition is the whole process of taking in and using food. If the nutrients are properly used by the body, you are in best of health. But sometimes this may not work. The body can get too much food (overnutrition) or not enough (undernutrition), it may also get food to satisfy hunger but not body needs (unbalanced nutrition). In some cases the body may not be able to use food the way it should. When this continues over a period of time, the result is malnutrition and the person is in poor health.

Have you ever heard the saying, "You are what you eat?" This is really very true for what you eat depends on your physical health. Consider your body as a factor, one that is working 24 hours a day, seven days a week. To run effeciently it has to have fuel and supplies. These are acquired from the foods you eat, without them the body function would slow down or stop altogether. But with plenty of food, water, air, rest, and activity this factory "will work to convert, build, repair, and produce the essentials you need to keep going."

In review, the food you eat does then do some very important jobs:

1. It furnishes fuel for energy
2. Provides for growth and repair of body tissues
3. Finally, it supplies substances that regulate all your body processes.

We will now investigate some of the basic concepts of nutrition:

The body must have food to keep "running." Even when you are sleeping, you need energy. The nutrients needed by the body for growth and maintenance of health may be divided into those contributing energy which are carbohydrates, fats, and proteins. The quality of food you must eat, then, depends upon how much energy that food can provide and the amount of energy you are going to use.

The next term we must be familiar is calories. The energy value of food is measured in heat units called calories. All food provides energy, some more than others. The potential of a food is called its calorie rating or value. For example, one slice of bread is 60 calories, a single pat of margarine is 50 calories. A calorie is technically defined as the heat required to raise the temperature of one gm of H_2O one degree Celsius. This energy is released slowly throughout the body as the food is digested and used.

Another very important term is digestion. Digestion is nature's way of releasing the nutrients from food. All digestion takes place along the alimentary canal which includes the mouth, stomach, and intestines. Strong muscle contractions mix food with enzymes and acid and break it into smaller and similar substances that the body then can use. (See Chart, p. 57 Focus on Foods). A nice atmosphere, appetizing food, and a happy frame of mind all help to make digestion go more smoothly. Strong emotions can upset muscle rhythm and secretions.

Absorption refers to the passage of the digested material across cell walls of small intestines into the blood stream. Once protein is broken down into simpler parts, digestion is over and absorption takes place. The protein nutrients are then mixed with the dissolved vitamins and minerals and are ready to enter the blood.

The sum of all the cells activities is called metabolism. Within a matter of a few hours all the nutrients are on their way to a specific function. It goes on around the clock, every day, morning and night. The blood carries the nutrients to all the cells in the body through a network of tiny blood vessels called cappillaries. As they go, they are dissolved in plasma of the blood.

The first stop is the liver, where the nutrients are "processed." Excessive glucose is removed from the blood and changed to glycogen for storage. The remaining nutrients pass through the liver and travel to the blood to the heart, on to the lungs where the red blood cells pick up O_2, go back to the heart and on to the rest of the cells of the body.

As the blood passes by, the cells pick and choose the proteins, vitamins, and minerals they specifically need. Energy uses some of the oxygen from the red blood cells and mixes it with glucose or fatty acids.

Review the chart on the following page. It explains the pathway food takes from the area where it enters the mouth, to excretion through the anus.

Digestion: The Story of How This **Becomes This**

The body prepares for digestion even before any food is eaten. Sights, sounds, and smells can trigger the flow of saliva, making your mouth "water."

Teeth grind the solid food. Saliva moistens it. A digestive enzyme in saliva changes the carbohydrates in the bun, milk, and apple into simpler forms of sugar. The sugar dissolves

Strong muscles in the stomach wall churn the food into a thick paste called chyme. A mild acid and strong enzyme begin to change the protein in the hamburger, bun, and milk into amino acids. The saliva that mixed with the food in the mouth continues to work in the stomach and change more of the carbohydrate to sugar. The still undigested fats are the last to leave the stomach for the small intestine, delaying the "empty" feeling.

As the food enters the small intestine, it is mixed with juices and enzymes from the liver, pancreas, and intestinal walls. These break the fat from the milk, hamburger, and bun into fatty acids and glycerol. They also finish digesting the carbohydrates and proteins. The vitamins and minerals are still unchanged by digestive juices. All the dissolved food elements now are ready to be absorbed through the intestinal wall and on into the bloodstream.

Indigestible fiber from the apple and the hamburger enter the large intestine along with waste from digestion. Together they leave the body through the anus. All that is absorbed from the large intestine is water.

Your emotions affect your digestion. When you are under stress, angry, or very tired, your muscle contractions and chemical balance may be thrown off. This is why it is especially important to be relaxed and cheerful at mealtime.

NUTRITION QUICKIE QUIZ

Directions:

Below is a series of "true or false" questions concerning nutrition. Indicate by T or F next to each statement what you believe to be the correct answer. Then check your answers at the bottom of the page.

1. The U.S. RDA (The United States Recommended Daily Allowances) were established by the FDA (Federal Food and Drug Administration) for use in nutrition labeling. These allowances are the amounts of vitamins, minerals, and other nutrients from food that the average healthy person should eat every day to meet his nutrient needs.
2. In order to maintain good nutritional health, people ought to follow a given food pattern.
3. From a nutritional standpoint, it is wise for an individual to buy "organic" foods (produced under conditions where pesticides and herbicides have not been used, and where fertilization of the soil has been done with natural composting, and, where the product does not contain additives) rather than foods not labeled "organic."
4. Grapefruit is included in the most effective weight-reduction diets because it "burns fat."
5. It is desirable to include foods in the diet that supply roughage or fiber.
6. Obesity caused by overfeeding during the first year of life may lead to obesity throughout childhood and adult life.
7. Vitamin E in large doses will prevent heart disease and cure infertility.
8. A cereal product that has been enriched is one to which vitamins and minerals have been added to restore those lost in milling and processing.
9. Carbohydrates, fats, and proteins in foods provide energy for the body.
10. "Empty calories" refers to foods which should be included on a weight-reduction diet.
11. When growth is completed, individuals no longer need to consume milk or milk products.
12. Proteins from the proper combinations of plant sources, such as rice and beans, are just as good for our bodies as the protein in meats.

ANSWERS: 1, 5, 6, 8, 9, 12 are true. The rest are false. See the explanation to the answers at the booth.

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LEARNING ACTIVITY #1

1. Define the following terms:

   a. Calories
   b. Digestion
   c. Absorption
   d. Metabolism
   e. Nutrition

2. Describe the process of digestion from the food you eat until it becomes the nutrients your body needs.

3. What are the three major functions of food?

4. What is the relationship of food to health?

LEARNING EXPERIENCE #2

CONCEPT: Food contains a variety of nutrients which each performs a different function.

GENERALIZATION:

- The body processes need all known nutrients
- The food we eat enables us to live, to grow, to keep healthy, and it provides us with energy.
- Food is made up of certain substances that work together and interact with body chemistry to serve the needs of the body.
- Deficiencies of the nutrients cause poor health and if extreme, causes clinical diseases
- Symptoms of nutrient deficiency diseases are related to the functions of the nutrients in the body.

TERMINAL OBJECTIVES: Comprehension of the nutrients, their functions, and food sources

INSTRUCTIONAL OBJECTIVE:

- Identify the major nutrients of foods
- Describe the composition of the various nutrients
- Relate the specific function of given foods based on their nutrient composition
- Describe the symptoms of nutrients deficiencies as related to the function of the nutrients.

LEARNING ACTIVITY: You will read the information sheet on "The Nutrients" on pages 10 to 19 and observe:

- Filmstrip: How Food Effects You.
- Filmstrip: You Are What You Eat.
- Filmstrip: Vitamins.
- Study: Nutritional Information Charts from Pillsbury.
- Review pamphlet: "Your Guidelines to Nutrients."

OPTIONAL ACTIVITY: You may wish to:

Read pamphlet: "Vitamins, Food, and Your Health."

ENDING
ACTIVITY: You will demonstrate your knowledge of the basic nutrients by taking the self-test on page 20.

FEEDBACK: You will compare your answers on your self-test with the Module's Answer Sheet obtained from your teacher, who will evaluate and determine if you can go on to Experience 3.

THE NUTRIENTS

We have talked alot about nutrients, but just what is a nutrient? It can be defined as a substance that is necessary for the functioning of the living organism. It is sometimes referred to as the material that nourishes the body. Again, as review, we know the nutrients perform 3 functions:

1. Provide the body with energy.
2. Provide material for building and upkeep of body tissues.
3. Provide material for body processes.

A single nutrient can be involved in any one of these functions, or two, or even all of them. Even a single food can take part in any of these functions.

There are six major categories the nutrients fall into, although there are more than forty-five individual nutrients that must come either already formed in foods, or raw material, which your body can convert into nutrients that it needs.

Each nutrient has certain specific jobs to do in the building, up keep, and operation of your body. Many require several of them to work together as a team. That is why it is so important to get all the nutrients you need. If even one of them is missing some jobs don't get done, and the rest of the nutrients can't do all their assigned jobs. Keep this in mind as you read about each of the nutrient groups.

There are five nutrient groups: protein, carbohydrate, vitamins, fats, water and minerals. We will go into each one specifically. In respect to the three main functions of food certain nutrients perform certain tasks. The first nutrient function, providing fuel for energy, is performed by carbohydrates and fats, and also by proteins. This energy function is usually expressed as a calorie. Carbohydrates and proteins each supply four calories per gram whereas fat provides nine calories per gram of food.

Performing the second function of nutrients are proteins and minerals. They supply the material for building and upkeep of body tissues, including the skeletal structure and the soft tissues.

Finally the nutrient most active in regulating body processes is the vitamin group.

The foods we eat are the sole source of nutrients. Most foods are classified according to the specific group. Such as, butter is a "fat food" and meat a "protein food." A food, then, is frequently classified according to the nutrient, such as carbohydrate, fat, protein, vitamin, or mineral, that makes the greatest contribution to the diet.

Now we will go into each nutrient and study them individually:

1. Carbohydrates--They are sugars, starches and cellulose (which is a fibrous material) in foods. Sugars and starches are important sources of energy. Cellulose serves as bulk and is now the topic of much research.

All sugars and starches are broken down into three simple forms during digestion. Glucose or blood sugar is the form in which all carbohydrates eventually furnish energy for the cells. A small amount of carbohydrates is stored in the liver as glycogen, or animal starch. This glycogen can be changed back to glucose very quickly. When you eat more carbohydrates than your body needs for energy, the excess is stored as body fat for longer storage. Glucose is needed for brain function also.

Carbohydrate foods comprise the mainstay of the diet of most of the peoples of the world. More than half of their nutrients are derived from carbohydrate foods that vary from country to country, but are similar in nutritive content. Some basic examples would be corn, rice, potatoes, etc. The primary function of carbohydrate is to supply energy. It provides fuel for one's musclar exercise. Adequate starch and sugar help to spare protein for performing energy for use in the body. Cellulose, as mentioned before, is a unique carbohydrate, in that we cannot digest it, but, it is useful as a source of bulk by the body, and aids in excretion of waste materials.

On the negative side, carbohydrates that are allowed to remain in the mouth, provide a favorable environment for the growth of organisms which cause tooth decay. This is why it is very important to have good dental care, and avoid excess snacking between meals.

Carbohydrates are found in abundance in a wide range of foods. Table sugar is prepared from sugar beets and sugar cane. Syrups, including maple syrup and corn syrup, are quite concentrated sources of carbohydrates. Starch is found in cereals and legumes. Wheat is used to make flour, and this is used for many foods found in the diet, such as bread, noodles, cakes, pastry, crackers, etc. Fruits and vegetables are a good source of cellulose.

The major carbohydrates may be found in the following four food groups:

1. Cereals and cereal products
2. Vegetables
3. Fruits
4. Concentrated sweets

Of these, cereal and cereal products form the largest group of carbohydrates.

The important role of carbohydrate in the diet cannot be minimized. It is one of our prime sources of calories. It also is related to protein and fat metabolism. It is a relatively low cost food, and most carbohydrate foods are rich in other nutrients too.

2. Fats or Lipids--The term lipid which you may see in some books, refers to fats and other compounds that resemble them in physical properties. Lipids are usually classified as simple or compound lipids. The simple are fatty acids and alcohol. They include fats or waxes. The second group are esters of fatty acids containing an additional alcohol and a fatty acid. They would include cholesterol. The fats found in the American diet are the simple lipids or truely fats.

Fats are the most concentrated source of energy. Weight for weight, fats supply twice the energy of either protein or carbohydrate. Some of the fat you eat is converted to adipose tissue. This fat covering protects your body against environmental changes, supports vital organs and gives your body shape.

Fat molecules are made up chiefly of glycerol and fatty acids containing carbon, hydrogen, and oxygen in a chain like formation. There are two basic kinds of fatty acids, saturated and unsaturated. A saturated fatty acid molecule contains as many hydrogen atoms as its carbon atom can hold. Fats that are solid at room temperature (lard, solid shortening, the fat on beef, pork, or lamb) are made mostly of these saturated fatty acids. Unsaturated fatty acids have at least two hydrogen atoms missing from the carbon chain. If only two are missing, the fatty acid is monounsaturated. If four or more hydrogen atoms are missing, the fatty acid is polyunsaturated. Fats that are liquid at room temperature (mostly vegetable oils used for cooking and salads) are made mostly of unsaturated fatty acids.

Of all the fatty acids, only one cannot be made in your body, that is linoleic acid, a polyunsaturated fatty acid. This essential fatty acid must come from ready-made foods. The best source, of course, is liquid vegetable oils. We mentioned cholesterol before as being an ester of fatty acid, with an additional alcohol. Cholesterol is a fat-like substance which is an important part of blood and tissues used to make hormones and Vitamin D. Your body makes most of its own cholesterol, but some also comes from animal foods you eat.

Cholesterol has been in the news lately. It has been blamed for causing heart disease by helping to form fatty deposits inside blood vessels. Studies have shown that diets rich in polyunsaturated fatty acids tend to lower cholesterol levels in the blood. It is still in the experimental stages and much research is needed in this area to find out more answers.

3. Proteins--Proteins get their family name from the Greek word meaning "first" because they are the basic structure of every living cell. As proteins were studied during the nineteenth century, they were identified one by one.

If your body does not get enough calories from carbohydrates and fats, your body can use protein for energy. However. using protein as fuel is expensive--like burning furniture to heat your house. That is why carbohydrates and fats are sometimes called "protein stores." They take over the energy responsibilities and free protein for its more important task of building and repairing.

Proteins from both animal and plant foods are digested into smaller units called amino acids. Your body can then rearrange these amino acids into the hundreds of special proteins your cells need. There are twenty-three different amino acids. Your body can make fifteen of them. The other eight are called "essential amino acids" because they must come already formed in the foods you eat.

The nutritive value of a food protein depends upon the amino acid it contains. The proteins that supply all the essential amino acids in about the same proportion needed by the body rate the highest. Proteins in milk, eggs, meat, fish, and poultry, fall into this category. Protein from beans or peanuts are an excellent source of plant protein. Protein from cereal, vegetables or fruits do not supply us with as good a source. Therefore it is best to rely on a mixture of both plant and animal proteins to get all eight of the essential amino acids.

Very little protein is stored in your body, so you must get an adequate supply in your diet, every day! The need for protein is greatest when you are growing, recovering from an illness, pregnant women and nursing mothers also need more protein than they do at other times.

4. Vitamins--Vitamins are substances which the body needs in very small amounts. Vitamins themselves are not burned for energy fats and carbohydrates are, or are not used as building blocks of cells, as proteins. But without them, many of these processes could not happen. You might think of vitamins as the chemical in your body that bring about all kinds of chemical reactions. The role of vitamins in nutrition, may be divided into two groups:

1. prevention of disease

2. participation in the regulation of the body processes.

When the first vitamins were discovered early in this century, scientists began assigning them letter names, A, B, C, D, E, and K. Vitamin B later turned out to be a group of vitamins now known as the B complex vitamins.

You may recognize some of the vitamins by their scientific names: For example, vitamin C is ascorbic acid, Vitamin B is thiamine and Vitamin B_2 is riboflavin, and niacin.

Vitamin A, D, E, K are known as fat soluble vitamins. They can be dissolved in fat and can be stored in the fat soluble tissues of the body. The B vitamins and Vitamin C are water-soluble. Any excess of these vitamins is lost in the urine. Because of this you need a fresh supply of the water soluble vitamins every day.

You can get all the vitamins you need by eating a variety of plant and animal foods. Therefore, it is not usually necessary for you to take multi vitamin pills unless your doctor recommends it. Since there may even be some vitamins that have not yet been discovered, it is wiser to rely on a good diet to supply you with your needed dietary requirements.

A deficiency disease is one that is caused by a lack of a specific nutrient in the diet. In the case of a vitamin deficiency, the disease can be cured or prevented by giving the missing vitamin. Each deficiency has its own symptoms, and is cureable only through the specific vitamin.

Enrichment of foods with vitamins has come to be commonplace to the consumers. For much of the food we buy today, breads, cereals, milk, etc. is already enriched or fortified with vitamins.

5. Minerals--Minerals are another group of compounds that are important but all are needed in different amounts.

The elements carbon, hydrogen, oxygen, and nitrogen make up most of your weight. These elements come from protein, carbohydrates, fats and water. They are not, however, the only elements your body needs. You need iron, calcium, phosphorous, sodium, potassium, magnesium. In addition you need tiny amounts of chromium, cobalt, copper, flurine, iodine, manganese, molybdenum, selenium, and zinc.

Minerals are important for strong teeth and bones. They also control the movement of fluids in and out of cells and keep the blood neutral. They help to digest food, absorb it, and remove wastes from cells. As with vitamins, you need minerals in order to use other nutrients properly and to keep your body functioning properly.

6. Water--Many people do not even think of water as a nutrient, and yet death will occur in a matter of a few days if water is not available. The importance of water is suggested by the fact that the normal body weight is approximately 55 to 65 percent water by weight.

Within the body, water is found in the cells, outside the cells, and in the blood stream. This water is important partially because of its ability to serve as a universal solvent, or a liquid almost anything will dissolve in. This solvent capability makes it possible for water to transport nutrients to the cells and to remove waste products. Water serves as a lubricant, facilitating movements of joints. In the lubricant role, water helps food to move through the digestive track. It also facilitates chemical reactions in the body. Another key function of water is to assist in regulating body temperature. Loss of water from the skin is an important mechanism for cooling the body. In a sense, water is a structural component of the body because its presence in cells helps to give the cell shape.

The recommended intake of water is about 6 glasses daily. Part of this can be provided by a variety of juices, soups, and beverages. In hot weather the intake of water needs to be increased.

SUMMARY

Let's review this lesson and summarize the nutrients. Food contains carbohydrates, fats, proteins, minerals, vitamins, and water. All of which are important for growth and the maintenance of good health. Energy is derived from carbohydrates, fats, and proteins. Protein also performs the unique role of providing the essential amino acids needed to manufacture the protein required by the body. Fats provide not only energy but also serve as carriers of the fat soluble vitamins. Carbohydrates are required for the complete metabolism of fats.

Minerals are needed for a variety of reasons. They promote proper water pressure and assist in maintaining acid-base balance in the body. Various minerals are required for the body's structure, such as calcium in bone and teeth.

The fat soluble and water soluble vitamins frequently serve in important metabolic reactions in the body.

All the nutrients play a very important role in the function of the body.

NUTRIENT	PRINCIPAL FUNCTIONS	BEST SOURCE	DEFICIENCY DISEASE
Carbohydrates (Sugar and Starches)	Supply energy	Breads and cereals, potatoes, lima beans, corn, dried peas, bananas, dried fruits, sweetened fruits, sugar, honey, jelly, jam	Since carbohydrates give a major source of calories, a severe case of calorie deficiency results in marasmus. The symptoms include thinness and wasting away of tissue. If person does not get food, he starves. This is not common in United States. Far more Americans suffer from too many calories, obesity.
Fats	Supply large amount of energy in a small amount of food--supplies essen0 ial fatty acids--carry fat-soluble vitamins A, D, E, K	Butter, margarine, cream, salad oil, cooking and table fats, fat in meats	None
Calories	Providing energy	All foods	Marasmus (thinness, wasting of tissue): starvation if severe enough

NUTRIENT	PRINCIPAL FUNCTIONS	BEST SOURCE	DEFICIENCY DISEASE
Protein	Building of all body cells and tissues	Meat, fish, poultry, beans, nuts (including peanut butter), milk, cheese, eggs. Cereals contain some protein which is important in many parts of the world; cereal protein is less important in the U.S. because animal protein foods are available.	Growth retardation, if protein deficiency is severe and calorie intake is more adequate. Kwashiorkor may develop in children. Kwashiorkor is characterized by muscle wasting, retention of fluids, weakness, pot belly, hair changes, skin changes. If not corrected the condition is fatal. The child is also more susceptible than normal children to the effects of infections, and may die from a bout with measles, diarrhea, or other infection.
Minerals			
Iron	Producing hemoglobin, the substance in red blood cells which arries oxygen to the tissue of the body	Meat, eggs, whole-grain and enriched cereals and breads, beans, dried fruits such as raisins and prunes.	Anemia (too few red blood cells or red blood cells which contain too little hemoglobin.)
Calcium	Building of bones and teeth. Very small amounts of calcium are needed for the clotting of blood and the functioning of the muscle and nervous system.	Milk and foods made from milk (cheese, ice cream.)	We don't yet know very much about the effects of calcium deficiencies, since humans can apparently adapt to intakes over a fairly wide range. There is evidence, however, that low calcium intakes throughout life may contribute to the development of osteoporosis, which is a disease of the bone and afflicts many elderly people.

NUTRIENT	PRINCIPAL FUNCTIONS	BEST SOURCE	DEFICIENCY DISEASE
Iodine	Proper function of the thyroid gland.	Iodized salt (we get some iodine from foods but in New York State the soil does not contain enough iodine to rely on food sources without using iodized salt.)	Goiter (enlargement of the thyroid gland.)
Fluoride	Resistance to dental cavities; may play a role in the formation of bone.	Fluoridated water, in areas where the water does not contain an adequate amount of fluoride naturally. In communities where the water is not fluoridated and does not contain natural fluoride, some protection for teeth may be obtained by application of fluoride solution to the teeth by the dentist.	Increased susceptibility to dental caries.
Vitamins			
Vitamin A	General growth, healthy skin and eyes.	Yellow, orange, and dark green leafy vegetables-Also animal fats--liver, whole milk, butter, vitamin A fortified margarine.	Extreme deficiency causes skin changes, night blindness, thickening of the cornea, and eventual blindness.
B Vitamins Thiamine	Utilizing other nutrients. Energy metabolism.	Whole grain and enriched breads and cereals; pork.	Beri beri (numbness in the limbs, gastro-intestinal disturbances; muscle degeneration; cardiac disturbance.)

NUTRIENT	PRINCIPAL FUNCTIONS	BEST SOURCE	DEFICIENCY DISEASE
Riboflavin	Utilizing other nutrients	Whole grain and enriched breads and cereals, milk	No well defined clinical deficiency syndrome; Cheilosis (cracking at corners of mouth) is typical
Niacin	Utilizing other nutrients	Whole grain and enriched breads and cereals. The amino acid tryptophan, present in protein, is partially converted to niacin in the body.	Pellagra (Diarrhea, skin lesions, mental derangement if severe.)
Vitamin C	Building collagen (the cementing substance that holds the cells of the body together)--a necessary constituent of many enzyme systems	Citrus fruits, tomatoes, cabbage, strawberries, melon, green pepper. Potatoes are a fair source.	Scurvy (Sore, bleeding gums; small hemorrhage under the skin; tenderness in joints and limbs; loss of appetite)
Vitamin D	Necessary for the utilization of calcium	Vitamin D fortified milk. The skin makes vitamin D in the presence of sunlight.	Rickets (Deformities in bones due to lack of calcification. Includes bowed legs, enlarged wrists and ankles, enlargement or "beading" of ribs, "pigeon" chest)

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LEARNING ACTIVITY #2

1. Tell the functions of each of the 6 classes of nutrients.

2. For each function listed below, tell which of the nutrients in column 2 help the function.

Function	Nutrients
_____ 1. Energy	a. Carbohydrates
	b. Fats
_____ 2. Growth and repair	c. Proteins
	d. Minerals
_____ 3. Regulates body processes	e. Vitamins
	f. Water

3. Write a brief statement describing the composition of the following:

   1. Carbohydrates
   2. Fats
   3. Protein

4. Below is a list of vitamins and minerals. Write the letter V for vitamins and the letter M for minerals.

_____ 1. Ascorbic Acid	_____ 6. Iodine
_____ 2. Thiamine	_____ 7. Flouride
_____ 3. Phosphorous	_____ 8. Riboflavin
_____ 4. Calcium	_____ 9. Niacin
_____ 5. Iron	_____ 10. Vitamin D

5. Discuss the following terms:

   cholesterol
   fatty acids
   amino acids
   essential amino acids

6. Describe 2 of the four functions that water performs in the body.

Optional Activity

Review the deficiency diseases and select a deficiency disease and do research on it. Summarize your findings in a poster for the classroom.

LEARNING EXPERIENCE #3

CONCEPT: The Recommended Dietary Allowances

GENERALIZATION:

- Individuals require the same nutrients, but in varying amounts depending upon their age, sex, and health status
- Age, Health Status, body size, sex, rate of growth. and physical activity affect calorie requirements of an individual
- The RDA are recommendations for daily amounts of nutrients for people in given age and sex groups in the United States
- The RDA can be criteria for assessing dietary adequacy

TERMINAL OBJECTIVES: Interpolate the RDA in menu planning

BEHAVIORAL OBJECTIVE:

- Explain the use of the RDA
- Identify nutrient requirements using the RDA
- Compare the RDA for various age and sex groups
- Specify the RDA for specific individuals or family meal selection

LEARNING ACTIVITY:

Read the information sheet on "R.D.A. Recommended Dietary Allowances" on pages 21 and 22

Read pamphlet: "Facts about Food."

Study charts: Nutrition Charts

OPTIONAL ACTIVITY:

You may wish to read:

Pamphlet: "Nutritional Content and Values of Some Common Foods--Proteins."

ENDING ACTIVITY: You will demonstrate knowledge of the basic concepts of nutrition by completing the self-test on page 23.

FEEDBACK: You will compare your answers on your self-test with the model answers obtained from your teacher. They will evaluate your depth and determine if you can go on to Learning Experience 3.

INFORMATION SHEET ON R.D.A.

All people need the proteins, carbohydrates, fats, vitamins, and minerals that you read about in Lessons 1, and 2. However, not all people need the same amounts of these nutrients.

How much do you need? That is dependent upon many things--your heredity, your age, your size, and whether you are male or female. It also depends on how active you are, how fast you are growing, and how healthy a person you are.

For example, as a teenager, you need twice the body building protein you did when you were six years old. During the child-bearing years, women need trice as much iron as me. A man who does heavy work needs more food energy (in calories) than a man who has a lighter office work job. A person who is ill may need a special diet to help him recover or to control a disease such as diabetes.

Remember, too, that nutrients work together as a team in your body. So when your intake of certain nutrients changes, your need for other nutrients may change. Foe example, the more carbohydrates you eat, the more thiamine (Vitamin B) your body needs to use the carbohydrates.

Does it seem that you would need a computer every time you ate a meal, to check and see if you were meeting the required nutrients? Fortunately, that isn't necessary. In 1943 the United States Food and Nutrition Board planned standards to meet our required needs. They are called The Recommended Dietary Allowances, or the RDA. They are revised every five years to take into account new findings in nutrition research.

The RDA are not hard-fast rules since individuals do differ. They are meant to be guides to good nutrition. The RDA were designed to show the levels of food intake to allow for the maintenance of good nutrition among all people in the nation and should not be based on the amount of food that would merely prevent dietary deficiencies to cover minimal needs. In each case, the allowance given for a nutrient is greater than the average needs of most people. This extra margin of safety provides for individual differences among people. In that way, the RDA are adequate to maintain good nutrition for practically all healthy people in the U.S.A.

A good diet is one that meets or almost meets the RDA. Individuals whose diets do not meet the RDA are not necessarily suffering from malnutrition. But there is cause for concern when a person gets less than two-thirds of the RDA of the Minimum Daily Requirement, (MDR). You may have seen them listed on cereal packages and other food labels. The MDR are estimates of the minimum requirements to prevent deficiencies. The RDA are the minimum requirements plus an extra margin of safety to maintain good health.

FOOD AND NUTRITION BOARD, NATIONAL ACADEMY OF SCIENCES–NATIONAL RESEARCH COUNCIL
RECOMMENDED DAILY DIETARY ALLOWANCES,* REVISED 1968
Designed for the maintenance of good nutrition of practically all healthy people in the U.S.A.

	AGE [b] (years)		WEIGHT		HEIGHT				FAT-SOLUBLE VITAMINS			WATER-SOLUBLE VITAMINS							MINERALS				
	From	Up to	(kg)	(lbs)	cm	(in.)	kcal	PROTEIN (gm)	VITAMIN A ACTIVITY (IU)	VITAMIN D (IU)	VITAMIN E ACTIVITY (IU)	ASCORBIC ACID (mg)	FOLACIN [c] (mg)	NIACIN (mg equiv)[d]	RIBOFLAVIN (mg)	THIAMIN (mg)	VITAMIN B_6 (mg)	VITAMIN B_{12} (μg)	CALCIUM (g)	PHOSPHORUS (g)	IODINE (μg)	IRON (mg)	MAGNESIUM (mg)
Infants	0	1/6	4	9	55	22	kg × 120	kg × 2.2[e]	1,500	400	5	35	0.05	5	0.4	0.2	0.2	1.0	0.4	0.2	25	6	40
	1/6	1/2	7	15	63	25	kg × 110	kg × 2.0[e]	1,500	400	5	35	0.05	7	0.5	0.4	0.3	1.5	0.5	0.4	40	10	60
	1/2	1	9	20	72	28	kg × 100	kg × 1.8[e]	1,500	400	5	35	0.1	8	0.6	0.5	0.4	2.0	0.6	0.5	45	15	70
Children	1	2	12	26	81	32	1,100	25	2,000	400	10	40	0.1	8	0.6	0.6	0.5	2.0	0.7	0.7	55	15	100
	2	3	14	31	91	36	1,250	25	2,000	400	10	40	0.2	8	0.7	0.6	0.6	2.5	0.8	0.8	60	15	150
	3	4	16	35	100	39	1,400	30	2,500	400	10	40	0.2	9	0.8	0.7	0.7	3	0.8	0.8	70	10	200
	4	6	19	42	110	43	1,600	30	2,500	400	10	40	0.2	11	0.9	0.8	0.9	4	0.8	0.8	80	10	200
	6	8	23	51	121	48	2,000	35	3,500	400	15	40	0.2	13	1.1	1.0	1.0	4	0.9	0.9	100	10	250
	8	10	28	62	131	52	2,200	40	3,500	400	15	40	0.3	15	1.2	1.1	1.2	5	1.0	1.0	110	10	250
Males	10	12	35	77	140	55	2,500	45	4,500	400	20	40	0.4	17	1.3	1.3	1.4	5	1.2	1.2	125	10	300
	12	14	43	95	151	59	2,700	50	5,000	400	20	45	0.4	18	1.4	1.4	1.6	5	1.4	1.4	135	18	350
	14	18	59	130	170	67	3,000	60	5,000	400	25	55	0.4	20	1.5	1.5	1.8	5	1.4	1.4	150	18	400
	18	22	67	147	175	69	2,800	60	5,000	400	30	60	0.4	18	1.6	1.4	2.0	5	0.8	0.8	140	10	400
	22	35	70	154	175	69	2,800	65	5,000	—	30	60	0.4	18	1.7	1.4	2.0	5	0.8	0.8	140	10	350
	35	55	70	154	173	68	2,600	65	5,000	—	30	60	0.4	17	1.7	1.3	2.0	5	0.8	0.8	125	10	350
	55	75+	70	154	171	67	2,400	65	5,000	—	30	60	0.4	14	1.7	1.2	2.0	6	0.8	0.8	110	10	350
Females	10	12	35	77	142	56	2,250	50	4,500	400	20	40	0.4	15	1.3	1.1	1.4	5	1.2	1.2	110	18	300
	12	14	44	97	154	61	2,300	50	5,000	400	20	45	0.4	15	1.4	1.2	1.6	5	1.3	1.3	115	18	350
	14	16	52	114	157	62	2,400	55	5,000	400	25	50	0.4	16	1.4	1.2	1.8	5	1.3	1.3	120	18	350
	16	18	54	119	160	63	2,300	55	5,000	400	25	50	0.4	15	1.5	1.2	2.0	5	1.3	1.3	115	18	350
	18	22	58	128	163	64	2,000	55	5,000	400	25	55	0.4	13	1.5	1.0	2.0	5	0.8	0.8	100	18	350
	22	35	58	128	163	64	2,000	55	5,000	—	25	55	0.4	13	1.5	1.0	2.0	5	0.8	0.8	100	18	300
	35	55	58	128	160	63	1,850	55	5,000	—	25	55	0.4	13	1.5	1.0	2.0	5	0.8	0.8	90	18	300
	55	75+	58	128	157	62	1,700	55	5,000	—	25	55	0.4	13	1.5	1.0	2.0	6	0.8	0.8	80	10	300
Pregnancy							+200	65	6,000	400	30	60	0.8	15	1.8	+0.1	2.5	8	+0.4	+0.4	125	18	450
Lactation							+1,000	75	8,000	400	30	60	0.5	20	2.0	+0.5	2.5	6	+0.5	+0.5	150	18	450

* The allowance levels are intended to cover individual variations among most normal persons as they live in the United States under usual environmental stresses. The recommended allowances can be attained with a variety of common foods, providing other nutrients for which human requirements have been less well defined. See text for more-detailed discussion of allowances and of nutrients not tabulated.

[b] Entries on lines for age range 22–35 years represent the reference man and woman at age 22. All other entries represent allowances for the midpoint of the specified age range.

[c] The folacin allowances refer to dietary sources as determined by *Lactobacillus casei* assay. Pure forms of folacin may be effective in doses less than ¼ of the RDA.

[d] Niacin equivalents include dietary sources of the vitamin itself plus 1 mg equivalent for each 60 mg of dietary tryptophan.

[e] Assumes protein equivalent to human milk. For proteins not 100 percent utilized factors should be increased proportionately.

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LEARNING ACTIVITY #3

1. Define the purpose for using the Recommended Dietary Allowances (RDA).

2. Using the RDA chart given in Learning Experience #3, identify the Recommended Dietary Allowances (RDA) for the following nutrients:

Calories	Riboflavin
Protein	Thiamine
Vit D	Calcium
Vit C	Iron
Niacin	

   in the following groups of people:

   A. infant (1-1/2 years)
   B. child (8 years)
   C. teenager - male (14 years)
      female (16 years)
   D. pregnant female

3. Look up the RDA for yourself.

4. Why does the RDA need to be revised periodically?

5. Design a day's menu for the following family, and use the RDA chart to insure they have met their Recommended Dietary Allowances.

   Father: 35 year old, 180 lb. laborer

   Mother: 32 year old, 130 lb. housewife
   6 months pregnant

   Children: 2 year old boy, 24 lbs.
   13 year old girl, 90 lbs.

LEARNING EXPERIENCE #4

CONCEPT: The Basic Four Food Groups

GENERALIZATIONS:

- The Basic Four Food Groups is a guide based on the RDA, for food to be eaten to provide an adequate diet.
- The Basic Four Food Groups are tools for nutrient education in the United States.
- The division of the food groups is based on nutrient content.
- Discriminate selection of food is essential for an adequate diet.

TERMINAL OBJECTIVES: Comprehend the basic principles of meal planning using the Basic Four Food Groups.

BEHAVIORAL OBJECTIVES:

- Identify the major nutrients found in each of the four food groups.
- List foods from each specific food groups.
- Differentiate foods into the Basic Four Food Groups.
- State the number of servings needed from each food group, per day, in order for an individual to obtain an adequate diet.
- Plan menus using the principles of the Basic Four Food Groups.

LEARNING ACTIVITY: You will read the information sheet on "The Basic Four Food Groups" on pages 24 to 26.

1) review the Nutritional Transparencies
2) observe filmstrip, Social Aspects of Nutrition
3) observe film loop, A Balanced Diet
4) study the pamphlet, "Your Guide to Good Eating and How to Use It."

OPTIONAL ACTIVITY: You may also wish to read:

Pamphlet: "Your Food - Chance or Choice."

Take the post-test of filmstrip, Social Aspects of Nutrition

ENDING ACTIVITY: You will demonstrate a knowledge of the Basic Four Food Groups by completing the self-test on page

Do the worksheet that comes with the filmstrip, Social Aspects of Nutrition.

FEEDBACK: You will compare your answers on your self-test with the model answers obtained from your teacher. Your teacher will evaluate your test and determine if you can complete the final learning experience.

The Basic Four

The food guide most often used in the United States today divides food into four groups. The foods within each group are similar in the kinds of nutrients they supply. The four groups are:

1) Milk and milk products
2) Bread and cereal
3) Fruits and vegetables
4) Meat, fish, poultry, and eggs

The foods in all four groups work together to supply the food energy and nutrients everyone must have for good health and growth.

The Basic Four Food Groups is a guide based on the RDA. If you follow it, the basic four will supply the body with an adequate diet. The division into food groups is on the basis of their nutritive content. We will now go into each group.

The milk group contains foods made from milk or milk products. Some would be cheese, cottage cheese, ice cream, buttermilk, puddings, cream soups. This group contributes calcium, Vitamin D, riboflavin, and protein to the diet.

The recommended number of servings in the milk and dairy product group is related to the age of the individual; for instance, two or more cups per day for the adult, four or more cups for the teenager. The servings in this group may be glasses of milk; they may be milk used in cooking--for instance, milk used in cream soup or in custard; they also may be cheese or ice cream.

The variety possible in this group is sufficient to provide appealing ways of consuming this group even for the person who does not regularly drink milk at each meal of the day. The value of the milk should be stressed to the woman who is pregnant, because the levels of calcium and phosphorus in milk provides these important minerals. It's also a very good source of protein.

The Meat Group

The meat group might be more accurately called the protein group for it includes other protein foods besides meat: fish, poultry, eggs, dry beans and nuts (including peanut butter). The "meat" term is used in a broad sense to include beef, veal, mutton, lamb, pork and pork products.

These foods need to be included in your diet to provide complete protein needed to build the body's tissues. Meat consumed in the recommended number of servings, and the protein available in milk, will insure adequate protein intake. All foods of animal origin are considered complete proteins, that is they contain all the amino acids needed by man for growth and development. Gelatin is an incomplete protein, lacking some essential amino acids. Most protein foods from plants are also incomplete proteins that lack one or more of the essential amino acids, but various vegetalbe proteins can be combined to provide all of the

essential amino acids. It is difficult to get your requirments from vegetable sources completely, this is why meat should be eaten daily. At least two servings are recommended daily.

Vegetable and Fruit Group

The fruit and vegetable group includes all fruits and vegetables and contributes mainly Vitamin A and C to the diet. Some vegetables and fruits are good sources of minerals and good "energy source" foods, but their primary importance is their content of Vitamins C and A. Good sources of Vitamin A are the yellow vegetables like pumpkin, carrots, winter squash, and dark green vegetables. Good sources of Vitamin C include citrus fruits and juices, tomatoes, and tomato juices, raw cabbage, melons, strawberries, green pepper, and potatoes (potatoes are not as good as a source of Vitamin C as the others listed, but may be important due to the quantities eaten by some people. French fries and potato chips have little Vitamin C, because it is lost in the preparation of these products).

Within this group, one serving of a food with Vitamin C should be eaten daily. This would be a citrus fruit or any other fruit or vegetable containing ascorbic acid. A second requirement in this group is that a serving of a dark green, leafy, or yellow vegetable should be consumed at least every other day. This requirement provides Vitamin A in amounts adequate to permit normal functioning of the visual cycle in the eye and helps promote healthy skin. The remainder of the four servings, above and beyond the servings of citrus fruit and green or yellow vegetables, can be met by any of the fruits and vegetables that might be used in menus each day.

Fruits and vegetables are valuable sources of minerals in your diet and also contribute varying amounts of vitamin we need every day.

Bread and Cereal Group

The last group, the bread and cereal group, is of value because of its content of the necessary B vitamins. It is also important for iron, and food energy. The group includes all enriched and whole grain breads and cereals. Whole grain breads and cereals are natural sources of all the important nutrients. Milling grain to make white flour, removes some of the nutrients, and enrichment simply means restoring the nutrients to the flour.

The recommended requirements are four or more servings of whole-grain or enriched breads and cereal products daily.

Many foods would be included in this group, such as all breads and cereals, noodles, muffins, crackers, graham crackers, rice and pastry products. These foods contain mostly carbohydrates, that is why they are important energy foods.

LEARNING ACTIVITY #4

1. List all foods you have eaten in the last 24 hours. Compile the foods into the basic four food groups, and see if you have met your requirements. List the Vitamin C and Vitamin A sources separately.

2. Using the basic four food guide, plan your meals and snacks for three days.

3. For the following food groups, give at least two examples of food from each group.

   A. milk group
   B. meat group
   C. vegetable and fruit group
   D. bread and cereal group

4. State the number of servings required each day from each group in order to have a balanced diet.

5. To what group does each of the following foods belong? Briefly discuss the main nutritive contribution of this group.

   A. cottage cheese
   B. eggs
   C. pineapple
   D. cornflakes
   E. peanut butter
   F. spinach

Optional Activity: Make a poster of the basic four with pictures taken from magazines, that show the basic four food group.

FINAL EXAM

1. Define the three major functions of food.

2. State the number of servings required each day from each group, in order to achieve a balanced diet?

3. Why does the RDA have to be periodically revised?

4. Discuss the following terms.

   Cholesterol
   Fatty Acids
   Digestion
   Calorie
   Absorbtion

5. Define the function of each of the 6 classes of nutrients

6. Classify 2 foods in each of the 6 nutrient groups

7. Name the Basic Four Food Groups

8. For each of the 6 nutrients, describe the major function.

9. Describe the Relationship of an adequate diet to health and well-being

10. Name 4 deficiency diseases and tell the nutrient that is lacking

11. Using the RDA chart, list the nutrients and the amounts that you require

12. You are assigned to help a family of 6. The wife is 33 years old, and confined to bed with a broken hip. The husband is 35 years old and works in the local cabinet factory. They have 4 children: 3 sons--12 years old, 10 years old, and 3 years old; 1 daughter--14 years old.

    Plan a 4 day menu cycle. You must make sure that each family member is receiving their RDA's and are meeting the Basic Four Food Groups.

TEACHER'S ANSWER SHEET 1

1. Define these terms:

   A. Calorie - the energy value of food measured in heat units. The energy potential of a food is called its calorie rating or value.

   B. Digestion - is the breakdown of foods into simpler components in the alimentary or digestive tract. Nature's way of releasing nutrients from food.

   C. Absorption - passage of digested materials across cell walls of the small intestine into the blood stream.

   D. Metabolism - the sum of all the cells activities as food is made into body tissues, energy is produced, and body tissue broken down.

   E. Nutrition - the science of food, how it is used by the body and how it effects health. The whole process of taking and using food.

2. Teacher will evaluate (See Chart).

3. Three functions of food:

   1. furnishes fuel for energy
   2. provides for growth and repair of body tissues
   3. supplies substances that regulate all your body processes.

4. What is the relationship of food to health?

   Since foods supply the raw materials necessary for the upkeep of the body, it is important that the right kinds and amounts of foods be taken to supply all of the body needs. Nutrition is a science of vital interest for man since it may be of great service in promoting better health and even of prolonging life.

TEACHER'S ANSWER SHEET 2

1. Six classes of nutrients are:

    1. Carbohydrates
    2. Fats
    3. Proteins
    4. Vitamins
    5. Mineral elements
    6. Water

    _____ Carbohydrates, fats, and proteins - fuel foods. They supply energy for work and heat.

    _____ Proteins, minerals, water, necessary for building new tissues or repairing old tissues.

    _____ Minerals, vitamins and water, act as body regulators.

2. (1) A, B, C
   (2) C, D, E
   (3) D, E, F

3. Carbohydrates are either sugars or more complex compounds, such as starch, which are formed by the union of many sugar groups. They are made up of carbon, hydrogen and oxygen.

   Fats are also composed of carbon, hydrogen and oxygen, but with these elements present in different amounts then carbohydrates. All true fats are alike in chemical nature and physical properties, they have an oily, greasy feel, are insoluble in water.

   Proteins also have carbon, hydrogen and oxygen, and also in different proportions. They also contain nitrogen.

4. 1. V
   2. V
   3. M
   4. M
   5. M
   6. M
   7. M
   8. V
   9. V
   10. V

5. Cholesterol - the commonest member of the sterols. It is present in many foods especially animal fat and can also be made by the body. It has become a popular topic of research lately, dealing with heart disease.

   Fatty acids - organic compound of carbon, hydrogen, and oxygen which combines with glycerol to make a fat.

   Amino acids - organic compound of carbon, hydrogen, oxygen, and nitrogen. Many amino acids form a definite pattern and make a protein.

Essential amino acids - are the amino acids that are required by the body.

6. a. Water acts as a solvent for all the products of digestion, holding them in solution and permitting them to pass through the intestional walls and into the blood stream.

   b. Water carries nutritive elements to the cells.

   c. Water carries carbon dioxide to the lungs and waste material and salt to the kidneys.

   d. Water regulates body temperature through evaporation from the skin and lungs.

TEACHER'S ANSWER SHEET 3

1. Teacher will evaluate using RDA chart.
2. Teacher will check student's evaluation of his own RDA.
3. The RDA needs to be revised periodically every 5 years to take into account new findings in nutrition research.

TEACHER'S ANSWER SHEET 4

1. Teacher will evaluate.

2. Teacher will evaluate.

3. a. Milk group - milk, cheese, ice cream, and other milk products.
   b. Meat group - meat, fish, poultry, eggs, or cheese, dry beans, peas, nuts an alternative.
   c. Vegetables and fruits - dark green or yellow vegetables, citrus fruits or tomatoes.
   d. Breads and cereals - whole grain or enriched products.

4. a. Milk group - 3 or more glasses for children, 2 or more glasses for adults. Cheese, ice cream, and other milk products.
   b. Meat group - 2 or more servings.
   c. Vegetables and fruits - 4 or more servings.
   d. Breads and cereals - 4 or more servings.

5. a. Cottage cheese - belongs to the milk and dairy product food group. These foods exceed other foods in calcium and riboflavin. They are only second to the meat group in protein.
   b. Eggs - belong to the meat group. This group ranks first in protein, iron, and niacin. Because of the high level of consumption, this group also ranks first as a cource of energy and second as a supply of riboflavin.
   c. Pineapple - belong to the fruit and vegetable group, and are very important source of vitamin C. This group supply only important source of vitamin C and half of vitamin A content. They also supply one-fifth of the iron ranking just below the meat and bread-cereal group.
   d. Cornflakes - belongs to the flour-cereal group. This group takes second place as a source or calories and iron and ranks first as a source of thiamine and niacin.
   e. Peanut butter - belongs to the meat group, and contributes protein, iron and niacin to your diet.
   f. Spinach - is a member of the fruit and vegetable group and is an important source of vitamin C and vitamin A.

TEACHER'S INFORMATION
ON NUTRITIONAL EDUCATION MATERIALS

The movies, filmstrips, charts, cassettes, etc. used in this module can be obtained from:

The Nutrition Information and Resource Center
Beecher--Dock House
The Pennsylvania State University
University, PA 16802

Telephone: (814) 865-1751 or 865-6323

See enclosed "Guide to Libraries and Clearing Houses which offer Information on Nutrition Education Materials" for further information.

The resources you will need can be obtained from the Nutrition Information and Resource Center by giving them the title, the number, and description of the material (i.e., film strip, chart, etc.). The material then will be sent to your school.

The resources will be listed according to number of Learning Experience. Any additional resources, such as pamphlets can be obtained by writing the organization. (addresses included)

Prerequisite:

1. "How Food Effects You" (12-19 years)
   (filmstrip) 946-74

2. "Nutritional Needs of Your Body"
   Motion Picture 299-74

Learning Experience 1

1. "The Wonder of You" (pamphlet)
   Write to:
   American Institute of Baking
   400 East Ontario Street
   Chicago, Illinois 60611

   pamphlet No. NE 7201 1972 11p. 20¢

2. The Food for Thought (charts)
   No. 378-74

3. Fuel for Life (video-cassette)
   No. 735-74

Optional Activity

1. Can Food Make the Difference
   American Medical Association
   Order Department
   535 North Dearborn Street
   Chicago, Illinois 60610

   Dept. of Foods and Nutrition
   No. 0138-4364, 97125M 1964 5 pg. 15¢

Learning Experience 2

1. How Food Effects You. (filmstrip)
   444-74

2. You Are What You Eat. (filmstrip, cassette tape)
   No. 2868-73

3. Vitamins (filmloop)
   No. 582-73

4. Nutritional Information Charts from Pillsbury (2 charts)
   No. 2551-74

5. Your Guidelines to Nutrients. (pamphlet)
   Write to:
   American Institute on Baking
   400 East Ontario Street
   Chicago, Illinois 60611

   No. NE 301 1972 8 pps. 20¢

Optional Activity

1. Vitamins, Food and Your Health
   Write to:
   Marcella Kaly
   Public Affairs Pamphlets
   381 Park Avenue South
   New York, New York 10016

   PAP No. 465 1972 28 pps. 25¢

Learning Experience 3

1. Nutrition Charts (charts) 2511-73.

2. Facts About Food (pamphlet by Heinz)
   No. 2616-73.

Optional Activity

1. Nutritional Content and Value of Some Common Foods--Proteins. (charts) No. 783-74.

Learning Experience 4

1. Nutritional Transparencies. (transparencies) No. 3310-73.

2. "A Balanced Diet." (filmloop) No. 73-73

3. Social Aspects of Nutrition. (filmstrip) No. 845-74.

4. "Your Guide to Good Eating and How to Use It." (pamphlet) Write to:

   National Dairy Council
   111 North Canal Street
   Chicago, Illinois 60606

   No. B60 1973 12 pps. 25¢

Optional Activity

Your Food--Chance or Choice? (pamphlet)
Write to:

National Dairy Council
111 North Canal Street
Chicago, Illinois 60606

No. B112 1973 12 pps. 13¢

A GUIDE TO LIBRARIES AND CLEARING HOUSES WHICH OFFER INFORMATION ON NUTRITION EDUCATION MATERIALS

Provided through the courtesy of
The Nutrition Information and Resource Center
The Pennsylvania State University

I. The Nutrition Information and Resource Center
Beecher-Dock House
The Pennsylvania State University
University Park, PA 16802 Telephone: 814-865-1751 or 865-6323

This center was recently established under the Nutrition Education Grant to the Nutrition Program, College of Human Development at Penn State University, provided by the Heinz Endowment and given through the Nutrition Foundation. It is a working collection of nutrition education materials, staffed by nutritionists.

SPECIAL SERVICE FEATURES:

1. Makes its services available to teachers, university faculty and students, professionals in other agencies, and the public-at-large.

2. Receives requests by letter, phone, or personal-on-site visits for help in identifying and selecting reliable nutrition information and educational materials.

3. Assists client in making arrangements, if needed, to secure by loan or purchase nutrition education materials.

4. Provides consultation to those planning a nutrition education exhibit, learning center, etc.

5. Provides referral to other professional and agencies when appropriate.

II. The Food and Nutrition Information and Educational Materials Center (FNIC)
The National Agricultural Library - Rm. 304
Beltsville, MD 20705 Telephone: 301-344-3719

This center was established to select, collect, maintain, and lend resource materials for use in training school food service personnel and by the nutrition education community. The FNIC collection includes both print and non-print materials related to food service and nutrition. Print materials include books, journal articles, pamphlets, government documents, special reports, proceedings, bibliographies, etc. Types of non-print materials maintained are films, filmstrips, slides, games, charts, audiotapes and video cassettes.

SPECIAL SERVICE FEATURES:

1. Maintains this collection and lends primarily to the following groups:

   a. Employees of the Food and Nutrition Service, USDA
   b. State School Food Service Directors and Staff
   c. County, City or District School Food Service Personnel
   d. Colleges and Universities offering courses applicable to school food service training
   e. Professional societies and research institutions involved in school food service and related subject areas
   f. Selected libraries with which FNIC shares reciprocal arrangements

2. Accepts requests by mail, telephone, or personal-on-site visits

3. Loans materials gratis

   a. Print materials for one month
   b. Non-print materials for two weeks (No more than three non-print media loaned at any one time to one person; films cannot be scheduled more than one month in advance.)

4. Makes available a catalog of the FNIC collection

   a. Materials are indexed according to specialized vocabulary, as well as by author, and title.
   b. Materials are abstracted, extracted, or annotated to provide descriptive information including intended audience.

5. Makes available a separate catalog, "Audiovisual Guide to the Catalog of the FNIC."

6. Issues from time to time Cumulative Indexes to update and supplement the Catalog.

7. Maintains a 24-hour telephone monitor, regular office hours are 8-5, M-F.

III. The National Nutrition Education Clearing House (NNECH)
2140 Shattuck Avenue, Suite 1110
Berkeley, CA 94704 Telephone: 415-548-1363

This is a service of the Society for Nutrition Education which provides reference to nutrition education materials (print and non-print) judged by qualified nutritionists to contain accurate information. Special services such as preparation of bibliographies, selection and abstraction of materials, administration of nutrition education questionnaires, etc.; can be contracted through the NNECH staff

NNECH is not a lending library. Reference lists and bibliographies prepared by the staff are offered at modest cost.

SPECIAL SERVICE FEATURES:

1. Provides extensive annotated bibliographies on such topics as food habits, method and kinds of nutrition education, and nutrition education and Spanish-speaking Americans.

2. Provides selected teaching/counseling materials and background reference lists for nutrition educators. Print and non-print materials as well as selected journal articles are included.

   a. Subject matter is described by key words
   b. Publication date, cost, and ordering information are given for each item

3. Provides two leaflets (one for the professional and one, the layman) listing reliable nutrition resources.

IV. The Office of Education and Public Affairs
The Nutrition Foundation, Inc.
888 Seventeenth Street,
Washington, D.C. 20006 Telephone: 202-872-0778

This foundation, created and supported by leading companies in the food and allied industries, is a public, non-profit institution. The Foundation is dedicated to the advancement of nutrition knowledge and to its effective application in improving the health and welfare of mankind.

SPECIAL SERVICE FEATURES:

1. Produces The Nutrition Foundation Index to Nutrition Education Materials which lists entries according to Source, Subject Matter, Readership Level, Audiovisual Materials, and Alphabetical Order by Title (including pertinent information about the publications); addresses of additional sources of nutrition education materials, information or personal contacts. (NOTE: Materials have not been evaluated for content and are not necessarily recommended by the Nutrition Foundation.) Cost of $5.00/copy is below cost of production.

2. Produces other nutrition education materials on various topics and makes available a catalog listing and order sheet for these items. Cost is modest.

3. Produces Nutrition Reviews, a recognized publication used widely by nutritionists.

APPENDIX B

A Module in Nutrition of the Elderly

"Old Can Be Beautiful"

a Module in

The Nutrition of the Elderly

for the

Home-Health Management Assistant

by

Jane B. Berkey

Pennsylvania Department of Education
Bureau of Vocational Education
(Project No. 14-7012)

PREREQUISITE: To complete this module, you will need to have some basic understanding of nutrition and the elderly. You must understand:

-Food is essential for good health

-Some health problems result from poor diets

-Working with elderly people can be involved but is very rewarding

If you feel you need a stronger background before starting this module of nutrition for the elderly, review the following material before proceeding.

2 pamphlets: Many Happy Returns

Foods I Remember

motion picture: Nutrition Needs of Our Body

If you have acquired the prerequisite competencies in some manner other than completing the above material, check with your teacher to see if any part of the material can be eliminated.

Objectives of This Module:

According to the criteria discussed in this module the student will:

Understand the fundamental concepts of nutrition for the elderly.

Apply the principles of nutrition to menu planning for the elderly.

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INTRODUCTION

The purpose of this module is to familiarize the student with the elderly, and the elderly's nutritional needs.

The basic needs of the elderly do not greatly differ from the basic needs of other age groups, but this specific group of our populations needs help in achieving these basic needs. Health needs are a paramount concern since four out of five elderly persons have one or more chronic conditions. This is why the Home Health Assistant can be so important to the elderly.

Those reaching advanced years, have gone through an inevitable part of living, and aging is a natural process. To make sure these years are enjoyed to the greatest extent, the nutrition of the elderly must play a very important part in their daily lives. The maintenance of a good nutritional status in the elderly is vital to them.

The learning experiences in this module are disigned to help you develop competency in demonstrating the particular skill of nutrition for the elderly. The lessons are developed to help the Home Health Assistant understand the contribution of food to maintaining the highest level of well being for the elderly, maximize food purchasing power, and plan and meet nutritional needs by shopping and preparing foods to meet their nutritional needs and diets for health problems.

MODULE STRUCTURE AND USE

Organization: This module contains an introduction and 3 sequential learning experiences. The learning experiences provide concepts, objectives, generalizations, resources and information sheets. They provide the major descriptions of what each learning experience entails.

Two types of objectives form the basis of the learning experience. The "end objective" and the "working objective." The "working objectives" helps you achieve the "end objective." Each learning experience has activities to help you accomplish the objective and by use of the tests at the end of each module, you should be able to determine if you have achieved each objective.

The first learning experience is designed to provide you the needed background information. The rest of the learning experiences apply the basic concepts of nutrition for the elderly into the areas of menu planning. By the time the final learning experience is completed, you should be able to apply the knowledge in your clinical experience.

Concepts: This module will cover the following concepts of nutrition for the elderly.

-A person's entire well-being is aided by adequate

-Menu preparation for the elderly

-Food Preferences

Overall Generalization: Nutritional, as well as non-nutritional factors play a role in food selection.

Objectives: This module contains 3 objectives. An educational objective, a terminal objective, and a behavioral objective.

The Educational Objectives are the ones the student will accomplish after completing this entire Module. They are:

-Understand the fundamental principles of nutrition for the elderly.

-Apply these principles of nutrition to menu planning for the elderly.

The Terminal Objectives are ones the student will achieve at the end of each learning experinece. They are:

-Understanding the comprehension of the relationship of food selection to the health and well being of the elderly
-Comprehension of the various factors that must be considered when planning menus for the elderly
-Incorporate an elderly's personal food habits into a menu plan

The Behavioral Objectives-each learning experience has its separate behavioral objectives. They are listed in each learning experience, and are what the student must do to accomplish the Educational and Terminal Objective.

Procedure: After reading the introduction on page 1 and the objectives, you should be able to determine how much of this module you must complete in order to go on to the next module. The following steps should be followed.

1. If you have the necessary background knowledge of the nutritional needs of the elderly, you can skip lesson number 1.

2. If you have the background knowledge on buying food on a limited income you can skip lesson number 2.

3. If you feel you have the background knowledge on meeting the elderly RDA's taking into consideration their likes and dislikes you can skip lesson number 3.

4. If you feel you can achieve the competencies without completing this module, with the approval of your teacher, you can choose to go directly to the end objective and meet the requirements and go on to the next module.

5. You may wish to look over the learning experiences to see what is expected. This will help you decide the learning experiences required of you.

Resources: Each learning experience has a list of required learning resources in the lesson at the end of the module.

Required Resource Equipment:

8mm film projector
film loop
tape recorder
projector screen
slide projector

LEARNING EXPERIENCE #1

Concepts: A person's entire well-being is aided by adequate nutrition

Generalization:

-Adequate nutrition is essential for optimum health of the elderly.

-Food habits and preferences are a product of complex factors associated with food beliefs and economy.

-Regardless of age, individuals have a need for all the nutrients.

Terminal Objective: Comprehension of the relationship of food selection to the health and well being of the elderly.

Instructional Objective:

-Explain the various factors that affect an elderly person's eating habits.

-Describe the nutritional deficiencies frequently associated with the elderly.

-Explain the basic four food group.

-Describe the aging processes that occurs in the body as one grows older.

-Define some special diets that the elderly have to follow to stay healthy.

Learning Activity: Before starting this lesson:

-review the basic four food groups

-make a chart of the Recommended Dietary Allowances for the older adult.

Read the pamphlet: Food Guide for Older Folks

Observe the film: Food and Nutrition

Read and Understand: "Information Sheet"

Optional Activity: Look over the different calorie contents of foods you have eaten for one day's menu.

Ending Activity: You will demonstrate a knowledge of the nutritional needs of the elderly by completing the self test on page 15.

Feedback: You will compare you answers on your self test with the model answer obtained from your teacher. Your teacher will evaluate them and determine if you can go on to lesson number 2.

INFORMATION SHEET ON NUTRITIONAL CARE OF THE ELDERLY

The Elderly

Aging is a natural, progressive process beginning at birth. It is an inevitable, universally shared experience. Advanced age is reached only by those who have proved themselves capable of survival.

As an individual advances from infancy to old age, he/she accumulates a wealth of skills, knowledge and life style. By the time the old age years are reached, life and years have fashioned a unique and very special person, a person of exceeding value and worth, with his own characteristics and idiosyncracies, possessing human dignity and deserving respect and support.

In the past two thousand years, the human life span has lengthened from twenty-two years to seventy years or more. Before 1900, children and young adults accounted for most of the deaths, the majority dying before forty-five years of age, with only twenty-four living beyond sixty-five. Since then, great studies have been done, and many improvements have been made to increase the average life span, and old age has replaced youth for the highest percentage of deaths.

The age sixty-five was once set as the time for the onset of old age. Aging, is however, a slow gradual process. Aged, the term which means old, must be applied on an individual basis. Some people are people who are old at forty-five, while others are still young and active at eighty.

What does being "old" really mean? To be old means a person has successfully met and survived life's challenges. It can also mean a person has reached a state of maturity in regards to physical growth. It also means somone who has lived through many experiences and is a source of skill and knowledge that can be a benefit to all of society.

The twilight years, the golden years, and the sunset years are all phrases used to describe these later years. Some of these phases tend to show these are the years of non-production. The years where a person can no longer function in society. But this misconception is wrong. Only a few, a small percentage of our elderly require institutionalization. The rest can be independent and live within our community. This is where the Home Health Assistant can be of help to the elderly. They can do things for them which they can no longer do, or are incapable of doing.

Before going into the part on nutrition, it is vital that one understand the elderly. They <u>desire</u> and <u>deserve</u> to be treated with respect, acceptance, and affection. It is important that dignity is preserved and old people are provided with opportunities to continue to participate in life to the fullest extent of their capacities so they may reach the satisfying potential of their age. Never underestimate the older adult. They have knowledge of life we all can learn from. Learn from them, and above all respect them, they are so deserving of this.

The Senior Citizen's Bill of Rights sums up the way we should treat the elderly. It also shows the important rights and obligations they themselves feel is important and necessary. Read the following and try to keep these items in mind whenever you work with an older adult.

The Senior Citizen's Bill of Rights

"Each of our Senior Citizens, regardless of race, color or creed, is entitled to:

"The RIGHT to be useful.

"The RIGHT to obtain employment, based on merit.

"The RIGHT to freedom from want in old age.

"The RIGHT to a fair share of community's recreational, educational, and medical resources.

"The RIGHT to obtain decent housing suited to needs of later years.

"The RIGHT to the moral and financial support of one's family so far as is consistent with the best interest of the family.

"The RIGHT to live independently, as one chooses.

"The RIGHT to live and die with dignity.

"The RIGHT of access to all knowledge as available on how to improve the later years of life."

Balancing these rights are:

"The OBLIGATION of each citizen to prepare himself to become and resolve to remain active, alert, capable, self-supporting and useful so long as health and circumstances permit and to plan for ultimate retirement.

"The OBLIGATION to seek and develop potential avenues of service in the years after retirement.

"The OBLIGATION to make available the benefits of his experience and knowledge.

"The OBLIGATION to endeavor to make himself adaptable to the changes added years will bring.

"The OBLIGATION to attempt to maintain such relationships with family, neighbors and friends as will make him a respected and valued counselor throughout his later years."

This group also said that, with health and adequate income, and freed of physical compulsions, the need to conform, complete, or seek education for utilitarian value only, older citizens can be free to adopt new roles and status and develop unusual potentials (Figure 1-4 The Senior Citizen's Charter is also known as the Senior Citizen's Bill of Rights, American Journal of Nursing Company. Reprinted from Nursing Outlook, November, 1964).

Overview

Eating habits are established early in life so that by the time a person reaches old age, his food likes and dislikes are deeply established. Over the years, food preferences are influenced by income, as well as cultural status. So there is a wide range of factor to consider when discussing the nutritional status of the elderly.

Malnutrition is a problem of old age. Foods are often chosen for their appetite--filling value rather than for their nutrients. This is particularly true of the elderly who live alone, as compared to the elderly who are living in institutions and under a dietitians care. The elderly are notorious for sipping tea and nibbling on toast, this satisfies their immediate hunger, but does little for meeting their nutrients.

Digestive Changes

As one ages, specific changes take place in the digestive tract. In the mouth, the number of functioning taste buds is smaller and the amount of salvia decreased. The lining of the mouth becomes thinner and loses some of its resiliency. It is therefore more easily injured when rough foods are eaten. Although they are still adequate for digestion, the amount of digestive enzymes are decreased. Aging also brings about changes in absorption rates of nutrients; a particular example is calcium absorption is decreased. Loss of muscle tone throughout the alimentary tract slows the process of digestion and tends to cause irregularities of elimination.

Nutritional Requirements

The nutritional requirements for the aged are essentially the same as for other adults, except the need for calories is not as great. Fewer calories are needed because activity is decreased and the basal metabolic rate is lower.

The basic four food groups should be included every day. The consistency of foods and methods of preparation may need to be altered to compensate for poorer chewing ability and decreased digestive power.

Let's review the basic four food groups again and relate them to the elderly nutritional needs:

Fruits and Vegetables. Four or more servings of fruits and vegetables should be included in their daily diets. The elderly will find them easier to eat if they are cooked and chopped or diced. Fruit and vegetable juice are good for this group because they are quickly used by the body, without chewing, and provide them with the needed vitamins and minerals. If a blender is available, many different drinks can be prepared for them to achieve their nourishments. Commercial baby food can also be used to increase the fruits and vegetable groups in the diet, this can be for the elderly who has problems chewing or who is coalescing. The addition of spices can also spruce up these items. This group is important for supplies of vitamin, minerals and bulk, along with the mean group, the dairy group supplies the body with proteins, which keeps all body organs and tissues healthy and functioning.

Dairy Products. Few elderly people regularly drink milk as a beverage. The daily requirements of the equivalent of two glasses can be met in various ways. Cheese and other milk-made foods are a good substitution. Eggnogs and milkshakes provide a refreshing change and is a nourishing fluid intake. Soups, custards, puddings, and ice creams are other ways milk can be included in their diet. These foods are high in calories, so particular attention must be given to weight control, so the elderly person is not gaining to much weight. But these foods are often enjoyed by the elderly persons because they are not overly sweet, and pose no problem with chewing. Skim milk and buttermilk are preferred to whole milk because of the lower fat and calorie content, providing the essential nutrients without unnecessary weight gain. Powdered milk can also be used by an elderly person especially one who is living alone, it is economical and can be mixed easily and can be stored.

Bread and Cereals. The bread and cereal group supplies the body carbohydrates which is needed for energy or fuel. This group tends to be the favorite one among the elderly. Four servings daily is the recommended requirement, but you often find the elderly eating breads and cereals as the main food in their diet. Cakes, soft cookies, and donuts are a favorite of this group. They are rather inexpensive but high in calories. The elderly person tends to choose these foods because they are soft and easy to chew and require little preparation. Since the enriched and whole grain foods offer the best sources of vitamins, the elderly need to be encouraged to include them in their diets.

Meats. Since meats are one of the most expensive foods in our diet, some of the elderly who live on limited incomes tend to eliminate meats from their diets. The recommended daily requirement is two or more servings of meat a day, but few ever achieve it. They should be encouraged to buy variety meats, such as liver, these meats are inexpensive but very high in nutrients, eggs and beans are also a very good source of protein. If the elderly person does not like these foods, they can be incorporated into casseroles or other dishes. Fish is also a very good source of protein and is sometimes less expensive than beef. It is soft to chew and can be dressed up with sauces and spices to make it more tasty.

The main problem the elderly have with meats is preparation. Some meats that are fried tend to dry out the meat and make it very hard for them to chew, which is a very big problem to consider when preparing meals for the elderly.

Other Requirements

One of the biggest dietary problem is to provide for sufficient roughage to maintain regular natural elimination. Stewed fruits, especially stewed prunes can solve this problem if eaten regularly.

The elderly person must also make sure he/she is receiving their required minerals. The minerals make up a large part of teeth and bones, and are needed to help in normal functioning of various parts of the body.

To name a few minerals which are very important to the elderly person, we must start with calcium. Calcium is a major component of our teeth and bones. It is best supplied in dairy products or green leafy vegetables.

Iron is needed to form oxygen carrying part of the blood, hemoglobin. It is found in foods such as liver, egg yolks, beans, dried fruits, and enriched products.

Water is also very important in their diets. It helps aid in digestion, absorption, and elimination of foods. It also helps regulate body temperature.

Vitamins are also a vital part of a healthy diet for the elderly person. They help regulate and protect the body processes. If the diet is inadequate in vitamins the elderly person should be encouraged to take vitamin supplements. If a wide range of foods are available, and if their nutritive value is recognized there should be little problem in getting the required amounts of vitamins. Unfortunately the diets of the elderly tends to be deficient in vitamins and once there is a deficiency it is hard to correct it in an elderly person.

The main vitamins that should be included in their diets are:

Vitamin A. It is needed to help resist respiratory infections and to ward off night blindness. The best sources are liver, dark green fruits and vegetables.

Thiamin This vitamin is especially important for the elderly patient for it is required for the proper functioning of many body processes. We can find thiamine in liver, dried beans and peas, and whole grain fruits and vegetables.

Riboflavin and niacin maintains good skin tone and other body functions. Good food sources include milk, liver, eggs, and enriched breads and cereals.

Ascorbic acid or vitamin C is very important, especially to the elderly person. Vitamin C keeps blood vessels, bones, teeth, and gums healthy. In addition to this and very important to an elderly person, Vitamin C helps to resist infection and increases the speed of wound healing. The best sources of vitamin C are oranges, lemons, cantelopes, tomatoes and broccoli.

Vitamin D is sometimes called the sunshine vitamin. Elderly persons who remain indoors most of the time need to be extra careful to assure they are receiving adequate amounts of vitamin D. This vitamin is needed for the utilization of calcium in the body. The best source is sunshine, but another available source is milk enriched with vitamin D.

Vitamin K is known as the clotting vitamin. It can be obtained by eating a normal diet, and the body also manufactures vitamin K on its own. The best sources of this vitamin is in green leafy vegetables such as spinach cabbage, kale and cauliflower.

Calorie Level

The less active an older person is, the fewer calories he/she needs. Keeping the calorie level under control is not an easy task for an elderly person, but a very important one. Weight control is an important factor for the prevention of many diseases.

Extra weight in the form of fat constitutes a burden to the circulatory system in that a blood supply must be provided to the extra tissues the heart then has an increased demand made upon it and the kidneys are also taxed in excreting additional waste products. Even muscles, bones and joints suffer from the tax of extra weight. Food troubles, knee aches, backaches, and breathing, and impaired circulation can result from excess weight.

The main way to reduce excess weight is through the calorie restriction. The total calorie intake is what counts and calories in excess of those used for energy purposes will be stored as fat. It is important to motivate an elderly person in order to make the dietary sacrifices. Never use frightening statements such as "You must loose or else . . . , "This may cause fear and a drastic reducing diet with dangerous results.

A reducing diet should be adequate in all the RDA's except calories. The rates of weight loss must also be considered before going on a reduction diet, 3-4 lb. weight loss per month is usually recommended.

Before any strict weight reduction scheme is carried out, for an elderly person a doctor should be consulted and the following of his instructions is vital for health safety factors. A cut back in calories can be done on an individual basis, but in the case of an obese elderly person a doctor or dietitian should definitely set the diet pattern.

It is important to remember not to prescribe a diet for another person. Every individual requiring a special diet has his own special needs. It is not wise to compare someones diet with another persons diet.

A prescribed diet is treatment and must be followed careful to get the desired results. If it is not followed it will not cure the condition they are suffering from.

A few simple rules to follow in cutting down excess calories for an elderly person is to:

1. Follow the basic four food groups, and:
   A. Eat the required amount but cut out the second helping.
   B. Prepare food without added fat.
      Use a teflon pan to avoid adding extra fat. Broiling meats are better than frying them.
   C. Cut down on butter or margarine, bacon salad dressings, whipped creams, and sweets.
   D. Eat 3 meals a day and avoid nibbling of high calorie but empty nutrient foods such as potato chips and candy.

In contrast to excess calorie intake, as many older persons suffer from a decrease in calories. This can be an important health factor to watch. If an elderly person is taking in fewer calories he is taking in fewer amounts of the needed nutrients. In general it has been found that the older person who takes in less food also suffers from deficiencies of protein, calcium, iron, and the B vitamins.

It is important to remember that each person has their own dietary patterns and a meal plan for one won't work for another. This is why it is vital to recognize the elderly person's eating habits and then alter it to assure that they are receiving an adequate, nutritious diet.

Fluid Intake

The older person generally needs to be reminded to drink adequate amounts of fluids. Usually marked improvement in general health follows increase in fluid intake. In some instances when fluid intake is increased, there is less constipation, skin texture is better, and the elderly person's mouth is less dry, which results in increased appetite. Urine is also more diluted and no longer causes burning or skin irritations.

Fluids should be spaced throughout the day. Large consumption at one time should be avoided. Some elderly persons have taken limited fluids for a long time, and drastic changes should be altered gradually.

If an elderly person has difficulty in controlling his urine flow, they might think that by controlling intake will cut down on this problem. They can quickly become dehydrated which can cause serious problems. So if extra fluid intake is reduced in the evening, extra effort must be taken to assure them they are receiving adequate fluid intakes during the day.

Chewing Difficulty

Dental and mouth problems often plague the elderly person. Sores and odors, dental carries (cavities) lack of teeth and poorly fitting dentures are all problems they have. By the time Americans have reached 75 years, two-thirds are toothless. The sad part of this is that it can be prevented.

Peridontitis is the biggest cause for tooth loss. It is a condition in which pockets of put form around the roots of the tooth. Preventative dentistry and proper tooth brushing is essential in early years to avoid this problem.

Many elderly persons have adjusted to the loss of their teeth and chew with their hardened gums. Chewing of hard foods is impossible, even persons with dentures find it hard to eat foods such as corn on the cob, shewy foods, or some raw fruits and vegetables, so eventually they are eliminated from their diet.

Wobbly or poorly fitting dentures also make eating difficult. The elderly person removes them thus preventing a sore mouth but as a result, looses the ability to bite and crush the food properly.

The loss of teeth can interfere with the elderly person meeting their nutritive requirements. As we stated before, even with dentures, some have problem eating. Oral hygiene after every meal is vital for the elderly person. As unclean mouth may cause odors that destroy appetite and interfere with the flavor of food. Care given to their teeth and mouthe will often result in improved appetites.

When caring for an elderly patient with dental problems, one must consider the type of foods used in meal planning. The diet should avoid hard to chew foods and incorpoarte into the diet foods that are easily eaten without excessive chewing.

Social Factors

Eating is generally a social activity. It is more enjoyable if there is someone to talk to and share the meal. An elderly person living alone looses interest in preparing and eating nutritional meals. A feeling of apathy and loneliness can often harm an elderly persons appetite. Mealtime can be a break in the daily routine of life, and it can be much more enjoyable if shared with someone. It can be a change in their otherwise routine life and it also adds some excitement.

Ethnic Factors

When considering eating patterns for the elderly, we cannot overlook the religious social or religious factors. The presence of the required nutrients is essential, not the type of food they receive. It can be difficult to try and tell an older person to drink milk for example, if

he has taken it for 60 years. All these ethnic factors must be considered when working with an elderly person. You have to consider their eating patterns and work around them to achieve proper nutritional adequacy.

Economic Factors

Having less money to spend can account for the strict diets some elderly persons. The added economic factors may cause them to save on food and thus, in turn, cause dietary deficiencies. Wise buying tips can help alleviate this problem. A steak need not be used to supply protein, when a lean hamburger can do the same thing. The cost of food need not be change good nutritious eating habits. Although some elderly persons, need help in achieving this goal. This topic will be discussed more in Lesson #2.

Special Diets

This topic will be thoroughly discussed in another module, but it is important to understand some of the common diets of elderly persons. Some of the common diets are the diabetic diet, low sodium diet, low residue diet, or high protein diet.

The diabetic diet is required when the pancreas does not produce enough insulin to break down blood sugars, causing diabetes mellitus. In some cases insulin is supplied by injections to control the diabetes. Proper dietary care is vital for the diabetic elderly person.

The low sodium diet is used by persons with heart disease. Salt contains sodium. This diet cannot completely eliminate salt because it is present in most foods. An excess of salt can cause fluid retention in patients with heart disease.

A low residue diet is used when there is a disturbance of the lower institutional trait. An example would be chronic diarrhea. In this diet all roughage such as salads and raw fruits, must be avoided. In some instances, the elderly person can eat vegetables or fruits if they are mashed or pureed. Everything served in this diet must be tender and nonirritating.

A high protein diet is used primarily for poorly nourished persons, the chronically ill, or persons with liver disease. It is a diet that builds up tissues of the body.

Conclusion

Nutrition is probably the most important single factor affecting the health of the elderly person. Proper nutrition can prevent disease and in some cases control diseases. The elderly person must eat properly. Their diets must include the basic four food groups. Some of the elderly suffer from being over or under weight this can be cured through calorie control.

When considering the dietary patterns of the elderly many factors must be considered such as financial situations, social patterns, and ethnic backgrounds. Food habits are generally established early in life and can be very hard to alter.

Some elderly persons are required to follow certain diets which are used to alleviate some health problems. Some of these are diabetic diets, low sodium, low residue and high proteins. All of these must be followed with care to assure the elderly of a healthy normal long life.

Working with the elderly can be very demanding, but they are well worth it. They are a very important part of our society.

LEARNING ACTIVITY #1

1. Talk with an elderly person about their food preferences and eating habits.

2. Study the different cultural eating patterns. Explain how the foods served need to be altered to feed the elderely.

3. Complete the following.

   1. _____ patterns and _____ preferences are established early in life.

   2. The calorie intake is usually _____ for the elderly persons.

   3. For the elderly, fruits and vegetables are easier to eat if they are _____ or _____.

   4. When activity is decreased, appetites tend to be _____ and calorie intake should be _____.

   5. The chief cause of tooth loss is _____.

   6. Less expensive meat is usually as _____ as the more expensive ones.

   7. The elderly persons diet is generally deficient in _____, _____, and _____.

   8. The diets of the elderly are usually high in carbohydrates because they are usually _____ and easier to _____.

   9. Eating is a _____ experience.

   10. A problem the elderly face is that they are either over eating or _____.

4. List 4 diets that are used to correct common problems for the elderly, and briefly explain them.

5. The presence of dentures influence the eating patterns of the elderly. Discuss this.

6. The older person living alone is most apt to be malnourished. Explain this.

LEARNING EXPERIENCE #2

Concept: Menu preparation for the elderly.

Generalization:

-Adequate nutrition can be attained with a combination of foods.

-No single food pattern is essential.

-Inadequate, excessive, or imbalanced intakes of nutrients may be detrimental to the elderly's health.

-Selection of food is determined by a multitude of personal, hereditary, and environmental conditions.

Terminal Objectives: Comprehension of the various factors that must be considered when planning menus for the elderly.

Instructional Objectives:

-Discuss factors which influence the elderly's eating habits.

-Plan a meal pattern for an elderly person.

-Define the problems the elderly must face in meal planning.

-Explain some shopping tips which could help the elderly in purchasing food.

-Describe some food myths.

Learning Activity: Before starting this lesson the student will:

-read the pamphlet: Meal Planning for the Golden Years.

-review the pamphlet: Food Guide for Older Folks.

-read the pamphlet: Food Hints for Mature People.

-read the pamphlet: Your Retirement Food Guide.

-observe the film: More Food for Your Money.

-read information sheet on pages 18 to 22.

Optional Activity: Observe the film, Mystery in the Kitchen.

Ending Activity: After completing the lesson the student will be able to demonstrate his/her knowledge of meal planning for the elderly by completing the self test on Page 23.

Feedback: The student will check his/hers answers with the model answers obtained from your teacher. Your teacher will then evaluate them and determine if you can go on to the next lesson.

INFORMATION SHEET ON "MEAL PLANNING FOR THE ELDERLY PERSON."

Introduction

Much attention is now being focused on the economic status of the elderly person. New legislation is bringing better financial improvements to their lifestyles, but menu planning and wise shopping is a vital factor that must be considered by them when shopping. Before a Home Health Assistant can begin to plan for an elderly person's meals, they must first be aware of the financial situation, so as not to prepare diets that are not economically possible. The elderly person may not benefit from extra food, if he is profoundly upset by having to spend his hard earned savings or have to accept charity.

Many elderly persons often suffer economic hardships. Some cannot stretch their budgets to meet the ever rising costs of food prices, especially protein foods, which is usually one of the most expensive items. Some elderly persons may live in low income housing develops and not even have means to keep or prepare foods, such as stoves or refrigerators. And when some elderly persons live by themselves, meal planning is even more difficult.

Another problem the aged are faced with is shopping. Many do not have the means to do comparative shopping, and often have to buy their groceries at one store, the closest one. Few older persons can afford to have food delivered to their homes, and many don't have the energy or money to shop around for food bargains.

Myths

There are some meal planning myths that the elderly person often believes, and one must be careful not to be lured by false advertisements. Some advertisements are attractive, very persuasive and promise results which are often misleading. Fake diet cures can bring about a false sense of security to the point of putting off proper medical attention. A common ad is for the cure of "poor tired blood," may be nothing more then an expensive mineral or vitamin supplement. Before taking such "cures" a doctor should first be consulted.

Another myth is that processed foods cause them to be poorly nourished. Modern food processing preserves the nutrition values or restores it to food. For example, fruits and vegetables are stored at the peak of their natural state to insure high quality. Food such as flour, bread, milk, salt and margarine are often supplemented with vitamins and nutrients. They are much more convenient to store and serves a very useful purpose.

Overview

What are some of the biggest problems the elderly face with meal preparation? Some include

1. Inaccessibility to market
2. High cost of food
3. Lack of kitchen equipment
4. Packages too large
5. Lack of appetite
6. Too much bother to clean up and cook food
7. Eating alone

What can be done to overcome some of these problems? This is the question the Home Health assistant will have to face. Let's try to find the answer to some of these problems.

As we stated before money is often limited for the elderly person, and therefore meal planning should be used to assure adequate meals. Planning meals ahead and preparing market list will eliminate waste and add variety to their meals. A meal pattern should first be established and a market order can be taken from that. An example would be

Breakfast: Fruit or juice
Cereal with milk
or
Egg, cheese, peanut butter, or meat
Bread with margarine or butter
Beverage

Lunch: Protein food
Vegetable Soup or Salad
Bread or crackers with margarine or butter
Fruit, fresh, canned, or juice
Beverage

Supper: Meat or Casserole
Vegetable and/or Salad
Potato, rice, noodle, grits etc.
Bread with margarine
Dessert
Beverage

If an elderly person prefers just 2 meals a day a meal pattern could be:

Morning: Fruit or cereal
Cereal with milk
or
Egg or meat
Bread with spread
Beverage

Mid Morn Snack: Milk, or milk soup, or vegetable soup
Bread or crackers with
Peanut butter or cheese

Afternoon: Meat or Casserole
Vegetable or Salad
Potato, rice, noodles
Bread with spread
Fruit
Beverage

Evening: Fruit or Vegetable juice

If either one of these menu patterns are used it is very easy to prepare a grocery list. Just decide the pattern you are to follow and fill in the number of servings required.

If money is limited, food may have to be eaten for 2 meals in a row or for 2 days. It is also an important factor that meat and fish be cooked soon after purchase and that small amounts be bought at a time. The person who has the facilities to cook and keep meats can buy them in quantities and freeze-store them. Cheaper cuts of meats can be purchased and used to make stews, meatloaf, and other dishes.

The economy minded-homemaker saves by bulk-buying and sales add to purchasing power. But for the elderly there is no advantage in buying bulk when items perish before they are used. (except for frozen foods) Buying in bulk also means more items to carry, and if the elderly person uses a cane, this can really be a hardship. Sale buying means that a large percentage of their income goes to a certain item, and few can afford to do that. Many factors can enter into the food choices of the elderly, such as upstairs apartments, distant shopping, transportation.

The elderly person living alone should avoid accumulating foods that cannot be kept in sealed jars or tins. Cereal such as flour, corn starch, oatmeal, and cornmeal frequently can become infested with insects if left uncovered. Prepared puddings that need only the addition of milk are easily prepared and very tasty. The smallest cans of vegetables are useful for the elderly person, but are higher in price then larger cans. Therefore, the larger can is a better buy if the elderly person doesn't mind eating them for more than one meal. There is also a large variety of dried soups which can make a nice addition to a meal. They are inexpensive, easy to prepare and come in a big variety of flavors. A caution must be made here to be careful that the elderly person does not eat prepared soups as a main meal, for they contain little or no meat and are not an adequate protein substitute. Many products such as TV dinners are convenient but expensive and can become tiresome if eaten too often. They are a nice meal for the elderly to use when in a hurry, but if they have the time and means to prepare a meal, from scratch, it will be cheaper.

Another problem the elderly run into is they can no longer use standard recipes. Since many eat lighter meals, and often alone, recipes have to be cut down to meet their needs.

If an elderly person has a frezer, it can become their best friend. They can prepare their familiar recipes and freeze the unused quantities. They can also buy frozen vegetables in bulk quantities and freeze the rest. This of course is cheaper. When their family or friends visit and bring food, nothing should be wasted if the leftovers can be frozen. Gardening is also a favorite hobby of the elderly, and if they can care for a garden, freezing the vegetables cna cut down on their food bill. A window box for vegetables can even supply enough vegetables for an elderly person, and saves from purchasing these items.

Fresh vegetables should be bought in small amounts, washed, drained and placed in waxed paper or a refrigerator bag. If an elderly person has poor eyesight, the frozen, prepared vegetables are easier for them to prepare. Remember the liquid off of vegetables can be saved for soup stock, and you are also conserving the nutrients.

Bread can be kept two weeks without spoilage, if it is wrapped securely in a refrigerator bag and kept refrigerated. Hard cheeses keep longer than soft cheeses. These are fine for casseroles, but the softer cheese are easier to ches. Cottage cheese is a favorite of the elderly, but if it is not eaten within a few days, it spoils. Therefore buying cottage cheese in the smallest containers is the wisest buy. Some elderly persons have found baby fruits or puddings to be a very satisfying dessert. They are rather inexpensive and there is no clean up from preparation.

Again we must emphasize, the older person should avoid a complete meal of coffee or tea, sweet rolls, muffins or hot dogs. Their meals must be planned. Shopping in a busy store may tire or confuse an elderly person, so a written list will help them remember. Items that were forgotten are very often omitted because of the dreaded extra trip. The Home Health Assistant can be a life saver to the elderly person, particularly when shopping is necessary. One must understand the elderly difficulties in order to become compassionate to their needs.

Planning Ahead

Emergencies always arise, and they tend to be a particular burden for the elderly. They should usually have on hand foods that will not spoil, and can be used to prepare a nutritious meal in an emergency. Sometimes bad weather, illness, or a lack of transportation can delay a shopping trip, and certain items should be kept for such emergencies.

1. Protein Foods-canned chicken, meat, or fish, baked beans, peanut butter, cheese, canned chili with meat, canned stews.
2. Milk group-non fat dry milk, evaporated milk, cheese, instant or regular pudding mix instant breakfast drink.
3. Fruits and Vegetables-small cans of fruits and vegetables instant potato flakes, canned orange, tomato or grapefruit juice. Dried raisens, prunes, figs, and canned vegetable soups.
4. Bread and Cereal groups-ready to eat and instant cereals. Graham crackers, enriched noodles, macaroni and rice.
5. Other foods-coffee or tea, jelly, jam, margarine, salad dressing, and canned or dried soups.

There are a few shopping tips which should be kept in mind when shopping. Always choose a food market that offers best quality for the price. Select foods from the four food groups first, then fill in with the extra items. Buy the most economical size package that can be stored properly. Smaller guantities that are completely used are better then larger ones that a portion is wasted. Learn about unit pricing for an easy way to compare prices., and above all never shop when you are hungary. You tend to buy on impulse and end up with unnecessary items. Store and prepare food to the greates benefit. If an elderly person is eligible, he/she should apply for food stamps. When shopping compare brand name items to store brand items. Usually the store brand is cheaper.

It is important to everyone, but particularly for the elderly person to shop for the best food buys. In the protein foods, eggs, chicken, turkey, fish, peanut butter give you high protein for a reasonable price. The non fat dry milk, and evaporated skim milk is the best buy in the milk group. For fruits and vegetables, it is best to buy them when they are in season, and plentiful. When out of season, canned fruits and vegetables are the better buy. Cereals that are to be prepared at home, such as oatmeal, are the best buy. They also are more nutritious then the sugar coated varieties. Enriched sliced bread is a better buy then bakery products. Day old items are a good choice whenever available. Always look for Enriched on breads and cereals to assure the necessary vitamins.

One should also read food labels whenever possible. A few points to look for are: Ingredients are listed in the order of amount, it then lists coloring, flavoring, or preservatives. If a cereal lists sugar, toward the top of the list, it may be too sweet for an elderly persons diet. The weight and measure give some indication of the number of servings that can be expected. Diebetic foods are identified as "sugar free" or without salt. The open dating sastems gives some idication as when the item can be selected when still fresh. Nutritional labeling is now appearing on many items. It tells the number of calories and servings, and nutrients. It can be very helpful in meal preparation.

As mentioned before if an elderly person is eligible, he should check into the Food Stamp Program. They should be encouraged to collect necessary documents and apply at the local Food Stamp Program, under the Division of Family Services.

For the elderly, life can be lonely. There is help available to them, if they just take advantage of it. For nutrition information and diet counceling, the Public Health Nutritionist, and or Public Health Nurse or Registered Dietitian can offer help and guidance. Home Economic Extension Agent and Expanded Nutrition Aides, or Utility Company Home Economist can offer recipes, food preparation, with kitchen equipment. In every community there are church groups that help the elderly with transportation for grocery shopping. All these agencies can become a very important part of the elderly persons life; if they only take advantage of the free services.

LEARNING ACTIVITY #2

1. Name 2 myths of Meal Planning the elderly often believe.

2. Name some of the biggest problems the elderly face with meal preparation.

3. According to the meal patterns in the lesson, plan a menu for your family for a week. Use a newspaper to locate food specials in stores to arrive at best food prices.

4. List some food items the elderly should have on hand in case of an emergency.

5. List some shopping tips that could make food purchasing easier for the elderly person.

Take-Home Test Questions

6. Look through a cookbook and identify three dinner meals which could be easily chewed by an elderly person with gum disease or loose dentures.

7. From question #3 prepare a shopping list for needed foods.

8. At a grocery store, compare cans or packages of the same food of similiar size but different brands, quality and price. Figure out unit price.

LEARNING EXPERIENCE #3

Concepts: Food Preferences

Generalization:

-Food habits vary among individuals

-The kinds of foods, the way they are prepared, their grouping in meals, and the manner in which they are served and eaten constitutes the food customs that are characteristic of the background of an individual

-Though food customs vary, the eating pattern can still meet the nutrient requirements.

-Food habits are a result of influences from economic, educational, social and cultural factors

Terminal Objective: Incorporate an elderly's personal food habits into a menu plan.

Behavioral Objectives:

-List factors that affect a persons food habits.

-Investigate an elderly persons food habits.

-Incorporate these food habits into a menu plan.

Learning Activity: -observe the film, Owl and Fred Jones.

Optional Activity: Make a list of your own food dislikes.

Ending Activity: After completing this lesson the student will be able to demonstrate his/her knowledge of elderly food preferences by completing the self test on page 26.

Feedback: The student will check his/her answer with the model answers. Your teacher will then evaluate them and determine if you have completed this module.

INFORMATION SHEET ON THE FOOD RREFERENCES OF THE ELDERLY

As stated many times before, food sustains life. All species require nourishment to stay alive, to grow, and to achieve good health. We all develop a variety of attitudes about food and eating. Some of us eat simply to live, others live largely to eat, and gain weight. The many countries of the world have developed an enormous variety of food stuff, and the elderly persons preferences vary greatly.

It is very important to determine the elderly persons food likes and dislikes before meal planning. If you have planned to have milk at all meals, and the elderly person then informs you they never drink milk, your meal preparation plan is completely wrong. You must alway determine food preferences before purchasing the food items.

Food habits are usually established in youth and vary greatly with regional and national customs. When a person has reached 65, it is almost impossible to alter these basic eating habits. The Home Health Assistant must recognize this when dealing with the elderly. If you make use of your understanding of the elderly person's needs, and show a genuine interest in them, you might be able to persuade them to incorporate some food items into their diet. You must be a good listener, and never make fun or tell them they are wrong about their food preferences. They are very important and unique to them.

Eating is a very personal thing. Before making any menu planning, you should study the elderly persons eating patterns, and habits. It is not important in what form or what time the elderly persons gets his food, but it is important that they receive the basic foods needed daily.

Many things make up food preferences and sometimes they do change over the years. Many times former favorites become troublesome causing indigestion, gas, or shortness of breath. They also can be determined by economic status. If the elderly person can no longer afford an old time favorite, they simply do without.

It is vital that food preferences be recognized. Before any meal planning is done, talk to the elderly person and learn his likes and dislikes, and then plan their meals from these. Appeal to their senses.

Select foo[illegible] that are appetizing, smell good and have different textures. Select foods that furnish the elderly persons daily needs. Another important factor to consider is to avoid most fried foods, rich sauces, and heavy desserts. These foods seem to cause indigestion, decrease appetite and do not furnish the best nourishment the elderly needs. Above all, be kind and considerate respect their food preferences and plan nutritious meals around them.

LEARNING ACTIVITY #3

1. Interview a person for their food preferences and eating habits.
2. Use a newspaper to locate food specials in the stores.
3. Plan a weeks menu cycle for this person, keeping in mind food preferences and eating patterns.
4. Return it to the teacher and let them evaluate it.
5. After every corrections have been made, return it to the elderly person to see if it has met their approval.

FINAL EXAM

1. Complete the following:

   1. _____ patterns and _____ preferences are extablished early in life.
   2. For the elderly, fruits and vegetables are easier to eat if they are _____ or _____.
   3. The chief cause of tooth loss is _____.
   4. Less expensive meat is usually as _____ as more expensive meat.

2. List four diets that are used to correct common problems for the elderly and briefly describe them.

3. List some food items the elderly should have on hand in case of emergencies.

4. Name some of the biggest problems the elderly face with meal preparation.

5. List some shopping tips that could make food purchasing easier for the elderly.

6. Describe how you would interview an elderly person for their food preferences.

7. How would you incorporate these food habits into a menu pattern.

8. Write a menu pattern that could be used for an elderly person.

9. Discuss the influence of nutrition on the physical well being of the elderly.

10. List, discuss, and evaluate factors which influence an elderly eating habits.

    A. Money
    B. Culture
    C. Availability
    D. Food habits
    E. Health status

TEACHER'S ANSWER SHEET LEARNING EXPERIENCE #1

1. Teacher will evaluate.

2. Teacher will evaluate.

3. 1. Eating, food
   2. the same
   3. chopped or pureed
   4. decreased decrease
   5. periodontis
   6. nutritious
   7. calcium, iron, protein
   8. inexpensive, prepare
   9. social
   10. undereating (undernourished)

4. low sodium diet - fluid retention
   low residue diet - gastric intestional disorder
   diabetic diet - diabetic mellitus
   High Protein diet - Build up of body tissues

5. Teacher will evaluate

6. Teacher will evaluate.

TEACHER'S ANSWER SHEET LEARNING EXPERIENCE #2

1. Fake diet cures
   Processed food in less nutritious

2. Inaccessability to market
   High food cost
   Lack equipment
   Packages too large
   Lack of appetite
   Too much bother to clean up
   Eating alone.

3. Teacher will evaluate

4. Teacher will evaluate

5. Teacher will evaluate

6. Teacher will evaluate

7. Teacher will evaluate

8. Teacher will evaluate

TEACHER'S ANSWER SHEET LEARNING ACTIVITY #3

1. Evaluate the students menu pattern. Make sure required foods, are listed and person's preferences are respected.

A GUIDE TO LIBRARIES AND CLEARING HOUSES WHICH OFFER INFORMATION ON NUTRITION EDUCATION MATERIALS

Provided through the courtesy of
The Nutrition Information and Resource Center
The Pennsylvania State University

I. The Nutrition Information and Resource Center
Beecher-Dock House
The Pennsylvania State University
University Park, PA 16802 Telephone: 814-865-1751 or 865-6323

This center was recently established under the Nutrition Education Grant to the Nutrition Program, College of Human Development at Penn State University, provided by the Heinz Endowment and given through the Nutrition Foundation. It is a working collection of nutrition education materials, staffed by nutritionists.

SPECIAL SERVICE FEATURES:

1. Makes its services avalable to teachers, university faculty and students, professionals in other agencies, and the public-at-large.

2. Receives requests by letter, phone, or personal-on-site visits for help in identifying and selecting reliable nutrition information and educational materials.

3. Assists client in making arrangements, if needed, to secure by loan or purchase nutrition education materials.

4. Provides consultation to those planning a nutrition education exhibit, learning center, etc.

5. Provides referral to other professional and agencies when appropriate.

II. The Food and Nutrition Information and Educational Materials Center (FNIC)
The National Agricultural Library - Rm. 304
Beltsville, MD 20705 Telephone: 301-344-3719

This center was established to select, coll-ct, maintain, and lend resource materials for use in training school food service personnel and by the nutrition education community. The FNIC collection includes both print and non-print materials related to food service and nutrition. Print materials include books, journal articles, pamphlets, government documents, special reports, proceedings, bibliographies, etc. Types of non-print materials maintained are films, filmstrips, slides, games, charts, audiotapes and video cassettes.

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SPECIAL SERVICE FEATURES:

1. Maintains this collection and lends primarily to the following groups:

   a. Employees of the Food and Nutrition Service, USDA
   b. State School Food Service Directors and Staff
   c. County, City or District School Food Service Personnel
   d. Colleges and Universities offering courses applicable to school food service training
   e. Professional societies and research institutions involved in school food service and related subject areas
   f. Selected libraries with which FNIC shares reciprocal arrangements

2. Accepts requests by mail, telephone, or personal-on-site visits

3. Loans materials gratis

   a. Print materials for one month
   b. Non-print materials for two weeks (No more than three non-print media loaned at any one time to one person; films cannot be scheduled more than one month in advance.)

4. Makes available a catalog of the FNIC collection

   a. Materials are indexed according to specialized vocabulary, as well as by author, and title.
   b. Materials are abstracted, extracted, or annotated to provide descriptive information including intended audience.

5. Makes available a separate catalog, "Audiovisual Guide to the Catalog of the FNIC"

6. Issues from time to time Cumulative Indexes to update and supplement the Catalog.

7. Maintains a 24-hour telephone monitor, regular office hours are 8-5, M_F.

III. The National Nutrition Education Clearing House (NNECH)
2140 Shattuck Avenue, Suite 1110
Berkeley, CA 95704 Telephone: 415-548-1363

This is a service of the Society for Nutrition Education which provides reference to nutrition education materials (print and non-print) judged by qualified nutritionists to contain accurate information. Special services such as preparation of bibliographies, selection and abstraction of materials, administration of nutrition education questionnaires, etc.: can be contracted through the NNECH staff.

NNECH is not a lending library. Reference lists and bibliographies prepared by the staff are offered at modest cost.

SPECIAL SERVICE FEATURES:

1. Provides extensive annotated bibliographies on such topics as food habits, method and kinds of nutrition education, and nutrition education and Spanish-speaking Americans.

2. Provides selected teaching/counseling materials and background references lists for nutrition educators. Print and non-print materials as well as selected journal articles are included.

   a. Subject matter is described by key words
   b. Publication date, cost, and ordering information are given for each item

3. Provides two leaflets (one for the professional and one, the layman) listing reliable nutrition resources.

IV. The Office of Education and Public Affairs
The Nutrition Foundation, Inc.
888 Seventeenth Street, N.W.
Washington, D.C. 20006 Telephone: 202-872-0778

This foundation, created and supported by leading companies in the food and allied industries, is a public, non-profit institution. The Foundation is dedicated to the advancement of nutrition knowledge and to its effective application in improving the health and welfare of mankind.

SPECIAL SERVICE FEATURES:

1. Produces The Nutrition Foundation Index to Nutrition Education Materials which lists entries according to Source, Subject Matter, Readership Level, Audiovisual Materials, and Alphabetical Order by Title (including pertinent information about the publications); addresses of additional sources of nutrition education materials, information or personal contacts. (NOTE: Materials have not been evaluated for content and are not necessarily recommended by the Nutrition Foundation.) Cost of $5.00/copy is below cost of production.

2. Produces other nutrition education materials on various topics and makes available a catalog listing and order sheet for these items. Cost is modest.

3. Produces Nutrition Reviews, a recognized publication used widely by nutritionists.

THE FOLLOWING BOOKS WERE USED AS REFERENCES IN COMPILING THIS MODULE

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APPENDIX C

A Module in Home Nursing for the Elderly

Home Nursing
for
The Elderly

A Module Designed for

The Home-Health Management Assistant

by

Paulette M. Popovich

Pennsylvania Department of Education
Bureau of Vocational Education
(Project No. 14-7012)

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MODULE STRUCTURE AND USE

Organization: This module contains an introduction and four sequential learning experiences. The learning experiences provide concepts, objectives, and generalizations, resources and information sheets. They provide the major descriptions of what each learning experience entails.

Learning Experience One provides needed background information on the needs of the elderly. The rest of the learning experiences apply basic concepts and home nursing skills to the care of elderly patients.

Concepts: This module will cover the following concepts of home nursing for the elderly:

- basic needs of the elderly patient
- personal care and appearance practices of the elderly patient
- attractive service of meals for the elderly patient
- body mechanics and patient care

Overall Generalization: Promoting good health in the elderly involves attending to their physical, social and mental well-being.

Objectives: This module contains three objectives. An "educational objective," a "terminal objectives," and a "behvaioral objective."

The Educational Objectives are ones the student will accomplish after completing this entire module. They are:

- recognize the basic health and personality needs of the elderly patients in the home
- apply basic concepts and techniques of medical care to elderly individuals in the home
- apply concepts and techniques of patient care to satisfy the elderly patient's psychological needs in the home situation

The Terminal Objectives are ones the student will achieve at the end of each learning experience. They are:

- list nine steps in preparing patient meal trays
- describe the procedure for helping a patient care for his mouth and teeth

- recognize the values, both physical and emotional, of offering the patient a backrub

- apply knowledge about the physical changes of the elderly to methods of patient care

The Behavioral Objectives--each learning experience has its separate behavioral objectives. They are listed in each learning experience, and are what the student must do to accomplish the Educational and Terminal Objectives.

Procedure: After reading the Introduction on page 1 and the objectives, you should be able to determine how much of this module you must complete in order to go on to the next module.

1. If you have the necessary knowledge required and feel you can go on, you can skip any learning experience, provided your teacher approves.

2. Instead, with the approval of your teacher, you can choose to go directly to the final exam and fulfill the requirements to go on to next module.

3. You may wish to look over the four learning experiences to see what is expected. This will help you decide the experiences you need.

Resources: Each learning experience has a list of required learning resources in the lesson. At the end of the module there is a resource information sheet which supplies needed information that enables the teacher to supply the necessary resources for this unit.

Required Resource Equipment:

film strip projector
cassette tape recorder
projector screen

INTRODUCTION

Advances in both the study of medicine and of aging have emphasized the fact that the elderly have special health needs.

We must understand that "good health" is a combination of physical, social and mental well-being, and is a basic human right and we must help our ever-growing elderly population to achieve the highest level of health possible.

The majority of our elderly live independently, in homes of their own or with their families. Therefore, the role of the Home Health Management Assistant is very important in the care and nursing of these patients in their homes. To help the elderly keep positive attitudes about themselves and their age and health we must not only care <u>for</u> them, with nursing and nutrition assistance, but we must also care <u>about</u> them. This should be the foundation upon which all home nursing activities rest.

LEARNING EXPERIENCE I

The Needs of the Elderly Patient

Concepts:

- basic human needs
- needs of the elderly
- needs of the elderly who are ill

Generalization:

While all people have a basic set of needs, the elderly, particularly the elderly who are ill, have special, additional needs.

Instructional Objectives:

Upon completion of this learning experience, the student will be able to:

1. List the five basic human needs
2. Describe problems older people may have in satisfying their nutritional needs
3. Describe three ways the Home Health Management Assistant can help the elderly patient meet his nutritional needs
4. List 4 physical needs, other than nutritional needs, the home nurse should help the patient satisfy
5. Describe ways of helping the elderly patient meet his physical needs
6. List the six physical changes experienced by the aging patient
7. Apply knowledge about the physical changes of the elderly to methods of patient care
8. Display methods of satisfying the elderly patient's needs for safety, security, and self-worth

Terminal Objective:

Upon completion of this learning experience the student will be able to recognize the basic needs of the elderly patient and apply basic care procedures to help satisfy these needs.

Learning Activity:

Read the information sheet on "The Needs of the Elderly Patient" on pages 3 to 5.

Review Filmstrip: Perspectives on Aging (Filmstrips 1, 2, 3)

INFORMATION SHEET ON THE NEEDS OF THE ELDERLY

All human beings, including the elderly have the same basic needs. These needs are: 1) physical needs - food and fluids, clothing, shelter, examination, activity and rest, 2) the need for safety and security, 3) the need to love and belong, 4) the need for self-worth and self-respect and 5) the need for self-realization.

These basic needs are progressive. That means the physical needs are the most basic and the need for self-realization is the least basic. When people are uncomfortable, they are concerned about fulfilling their most basic needs first. Older people want to continue to meet their needs by themselves, but it may be hard for them to do this, especially if they are ill. Home Health Management Assistants should look for ways to help patients do this.

Basic Physical Needs

Older people have the same nutritional needs for fats, proteins and carbohydrates as younger people, except that they need fewer calories. Older people may not be able to chew as well as when they were younger. Some elders lose their appetite because their senses of smell and taste have declined. Some will not eat because they cannot move well enough to feed themselves, or because they are tired, unhappy or lonely. The home nurse must be alert to these possibilities.

When someone needs your help to eat, take plenty of time. Sit down with the patient. Encourage him to do whatever he possibly can to assist you, even if it is only holding a straw. Never feed anyone who is lying flat in bed unless this is absolutely necessary! With age, swallowing often becomes more difficult and choking could occur.

Whenever possible you should try to meet your patient's needs, including food likes and dislikes.

Dehydration, caused by too limited a fluid intake, is a problem with many older people, especially those who are ill. Some drink less fluid because fluids are not made easily available to them. The home nurse should make sure fluids are available at all times.

To help patients keep a regular elimination system, the home nurse should also provide healthy foods (especially vegetables and fruits) and encourage patients to exercise, moderately, as possible for the individual.

Our bodies need to move in order to function efficiently. Without movement our muscles become flabby and our minds become dull. Frequent position changes - lying, sitting, standing, and walking - are necessary for good circulation and breathing.

Provision for activity of some sort should be made for patients in amounts appropriate for their abilities. Those people who can only sit in chairs should be moved frequently. Instead of spending six consecutive hours in their chairs, they should spend three two-hour periods sitting with rest periods in bed in between. While sitting, patients should be encouraged to shift their weights from side to side.

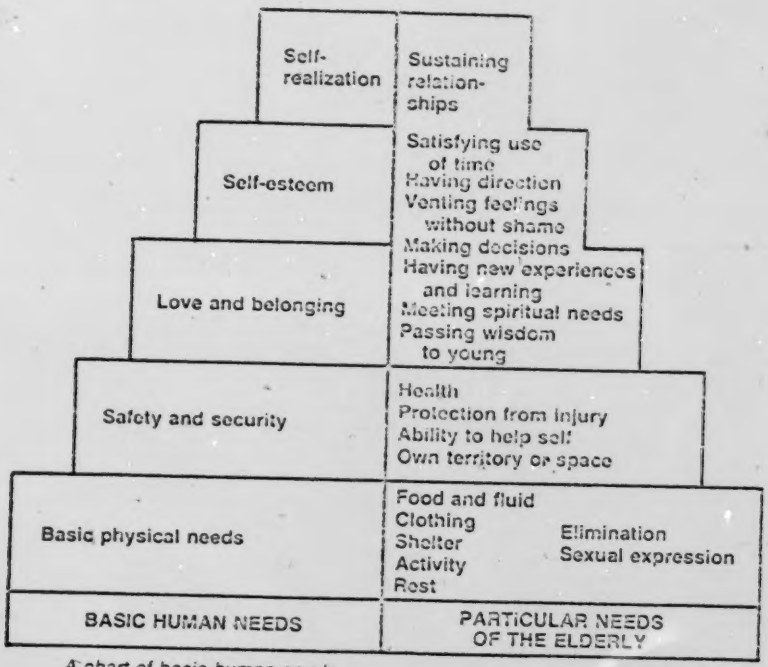
You should always watch for what your patient can do by himself. Encourage even small movements. People benefit most, both physically and mentally, from movements they perform themselves.

Everyone needs rest. Older people tend to sleep fewer hours and less deeply than others. With lessened activity, especially with illness, they tend to nap during the day and go to bed early in the evening. Consequently, they cannot sleep at night. Not only do they not sleep, they worry about not sleeping. Helping the patient stay active helps this but the Home Health Management Assistant's thoughtful care can also help. A backrub, a warm drink, a snack, or a short conversation may be all that is needed to make the patient feel relaxed enough to fall asleep.

Safety, Security and Self-worth Needs

As people grow older, they have more accidental injuries and many of these accidents are due to the physical changes of aging. Such changes include: 1) impairment of vision, 2) hearing loss, 3) skin deterioration, 4) lessened sensitivity to pain, heat and cold, 5) slowed reaction times and 6) decrease in their sense of balance. As a home nurse, the Home Health Management Assistant must be aware of these changes and the threat they pose to the elderly's well-being. While patients should be encouraged to do things for themselves, the home nurse must supervise their activities to avoid injuries as a result of these physical changes. Doing this will help the patient feel more secure as well as feel proud and independent.

As a Home Health Management Assistant, you have a unique opportunity in your job as a home nurse for the elderly. You can display a genuine interest and caring about your patient, making him feel self-worth and loved. Talking, listening and building trust with your patient is just as important to your success as a home nurse as are the skills and techniques of medical care.



A chart of basic human needs

LEARNING EXPERIENCE I

Self-Evaluation

1. List the five basic human needs.

2. Explain why elderly people often have difficulty satisfying their nutritional needs and name three things the Home Health Management Assistant can do to help the elderly satisfy these needs.

3. List 4 physical needs, other than nutritional needs, the Home Health Management Assistant should help the elderly patient satisfy.

4. What is dehydration?

5. Why does dehydration often occur in elderly patients and how can the home nurse help prevent it?

6. What can the home nurse do to help patients retain a regular elimination system.

7. Describe how the Home Health Management Assistant can help the elderly patient satisfy his need for rest.

8. By allowing a patient to perform his own daily tasks with only your supervision, what needs are you satisfying? (List 2)

9. Imagine you are caring for an elderly person who is restricted to a chair or bed. What activities could you suggest to help him keep active? Why not list these and keep them handy to refer to when you are preparing to go into a home to care for an elderly person.

10. Place a blindfold over one eye. Go about your normal activities for one hour. What problems do you have? Remove the blindfold. How do you feel?
When evening comes and it begins to get dark, place the blindfold over your eye again. Go into a room without lights and try to navigate about. What problems do you have? How do you feel? Remove the blindfold but don't turn on the lights. How do you feel? Do you still have difficulty getting around? Why or why not? With all these problems and feelings in mind, try and imagine the problems and feelings of the elderly patient whose sight is impaired. Also, try to imagine the insecurity this impairment can bring. How can you, or a home nurse, help? Is understanding his problem a key?

LEARNING EXPERIENCE II

General Care of the Elderly Patient

Concepts:

- Normal personal care and appearance practices of the elderly
- Methods for keeping care and appearance practices normal for the elderly patient
- The relationship between personal care and appearance and physical and emotional well-being

Generalization:

Keeping personal care and appearance practices as close to normal as possible helps the elderly patient feel better, emotionally and physically.

Instructional Objectives:

Upon completion of the learning experience, the student will be able to:

1. List four areas of personal hygiene the Home Health Management Assistant should help the patient attend to
2. Describe the procedure for helping a patient care for his mouth and teeth
3. Describe the procedure for helping a patient care for his face, hands and hair
4. Recognize the values, both physical and emotional, of offering the patient a backrub

Terminal Objective:

Upon completion of this learning experience, the student will understand the needs for and methods of keeping the personal care and appearance practices as normal as possible in the care of the elderly patient in the home.

Learning Activities:

Read the information sheet on "General Care of the Elderly Patient" on pages 8 to 10.

Review Filmstrips: Perspectives on Aging (Filmstrips 4, 5)

The pamphlets: "Caring for the Sick in the Home"
"Home Nursing Handbook"

INFORMATION SHEET ON GENERAL CARE OF THE ELDERLY PATIENT

Everyone developes a special routine in his personal hygiene. When an elderly person must depend upon someone else to help him with these routine activities he feels especially helpless. Couple this with illness and the need for emotional support is even made greater. The home nurse can help the patient accept this situation by: 1) following the patient's personal schedule insofar as possible, 2) by encouraging him to do as much for himself as possible and 3) by demonstrating skill and efficiency in nursing care.

Some of the areas the home nurse should attend to are: 1) caring for patient's mouth and teeth, 2) caring for patient's face, hands and hair, and 3) giving backrubs.

Caring for the Patient's Mouth and Teeth

Caring for the patient's mouth and teeth is really very important to both the physical and psychological well-being. We all know how much better we feel after we brush our teeth. Illness and medications often cause unpleasant mouth tastes. Also, oftentimes older people develop conditions causing these unpleasant tastes. If the patient is unable to go to the sink and brush his teeth, the nurse should provide a tray with the necessary equipment.

Equipment--Place on a tray:

- Toothbrush
- Toothpaste or powder
- Prepared mouthwash--either commercially made or made by putting ½ teaspoon each of salt and baking soda in a glass of water
- A small basin for spitting
- Glass of fresh water
- Bath towel
- Damp washcloth or facial tissue
- Lubricant for the lips

Many older people wear dentures. If the patient wears dentures, they should be removed and the mouth cleansed. The patient may use a cotton swab and some mouthwash. Then the dentures should be taken to the bathroom, brushed and rinsed with cold water. Care must be taken in handling dentures as they break easily.

Caring for the Patient's Face, Hands, and Hair

The patient's face and hands should be washed before meals and at other times when necessary for his comfort. For the patient in bed, the following equipment should be provided to help him bath himself.

Equipment--Place on a tray:
Wash basin partly filled with warm water
Mild soap in a soap dish
Hand lotion
Face cream
Bath towel
Washcloth
Face towel

Thorough brushing of the hair is necessary to remove the dirt and lint which accumulates when a person lies in bed. Well--groomed hair improves the patient's morale and adds to his comfort.

Giving a Backrub

The backrub not only stimulates blood circulation but it also aids in relaxing the patient. It should be remembered that backrubs are not only for those elderly patients confined to their beds. Even those patients able to get up and about can benefit from this. Remember that this also is a way of making the patient see you care. It's a good time for conversation, too.

EQUIPMENT
Rubbing alcohol, or oil, if prescribed by the doctor
Pan of hot water
Talcum powder

PROCEDURE
1. Warm alcohol or oil to body temperature in the pan of hot water.
2. Check to see that your fingernails are short and smooth. Remove rings or bracelets which might be cold or strike the patient. Warm your hands by washing in hot water.
3. Turn the patient on his stomach with his head turned to one side, and with his arms in a comfortable position on either side of his head. Adjust bedding and sleeping garments to expose his back and shoulders.--if appropriate.

4. Pour a little warm alcohol or oil into palms of your hands.
5. Place the palms of your hands in the center of the patient's back and rub firmly up the spine, across the shoulders, downward along the sides of the back to the buttocks, then upward again, repeating several times. Use a smooth, rhythmic motion, never lifting your hands from the patient's body. Pour more alcohol or oil into your palms. Place your hands on patient's lower back with thumbs over his spine. Rub up the back and neck by moving your hands in a circular loop. Rub patient's neck and shoulders well. Move hands back to buttocks in one long, smooth motion. Repeat several times.
6. Sprinkle powder on his back and rub in lightly. Help patient to a comfortable position. Straighten sleeping garments and bedding.

LEARNING EXPERIENCE II

Self-Evaluation

1. List three ways the Home Health Management Assistant can help the elderly patient feel more comfortable when maintaining his personal care and appearance with the home nurse.

2. Name 6 things that should be included on a tray given to a patient to care for his mouth and teeth.

3. List three things to include on a tray given to a patient to wash his face and hands.

4. Describe the procedure for giving a patient in bed a backrub.

5. What 3 basic human needs are satisfied by attending to patient's personal care and appearance practices?

6. Give a friend or family member a backrub. Be sure to use enough pressure to stimulate circulation but not so much as to hurt. Try to rub someone's back as they lie down, then try it again as they sit in a chair. (See procedure, page 9)

7. Arrange a tray containing all the equipment a patient may need to brush his teeth. Do you have everything suggested in the information sheet? What can you think of to add to the tray to make it brighter? (a colorful towel under the equipment, colorful paper cups)

8. Arrange a tray containing all the equipment a patient may need to care for his hands, face and hair. Do you have everything suggested in the information sheet? What can you think of to add to the tray? (special hand or face lotion, nail file or emory boards, a lightly scented cologne or after shave lotion) Be sure the equipment on the tray is well-balanced.

LEARNING EXPERIENCE III

Feeding the Elderly Patient

Concepts:

- appetizing foods for the elderly patient
- attractive service techniques for meals for the elderly patient

Generalization:

Preparation of appetizing foods and attractive service encourages the elderly patient to eat.

Instructional Objectives:

Upon completion of the learning experience, the student will be able to:

1. Recognize the importance of making mealtime enjoyable for elderly patients
2. Recognize the need for proper cooking of foods
3. Apply what has been learned about the general physical changes of the elderly to menu selection and preparation
4. Describe a variety of ways of garnishing foods
5. Recognize the need for patient meal scheduling
6. List nine steps in preparing patient meal trays
7. Describe methods for making the patient more comfortable and making the meal more enjoyable for the elderly patient

Terminal Objective:

Upon completion of the learning experience, the student will be able to determine foods appetizing to an elderly patient and serve them in an attractive way, which will encourage him to eat.

Learning Activity:

Read the information sheet on "Feeding the Elderly Patient" on pages 13 to 15.

INFORMATION SHEET ON FEEDING THE ELDERLY PATIENT

Mealtime should be one of the most enjoyable experiences of the patient's day. To make it so, the Home Health Management Assistant will have to exert a special effort to serve meals which will appeal to the elderly patient.

Good cooking is, of course, essential for all foods, but particular attention should be paid to vegetables. They should be cooked to the point of doneness, yet retain some crispness; and the method of serving vegetables should be varied from day to day. Consistency of food must be determined by the type of diet. Many elder patients need softer foods, but care should be taken to avoid serving food which is either too runny or too dry. As a rule, mild flavored foods are more readily accepted by a sick person than strong flavored or highly seasoned foods. Remember, though, that the elder oftentimes have lost some of their taste sensitivity. Keeping flavors mild is only a general rule. Be sure to ask your patient if the foods are too bland and cook for him, not for the rule book. (see page 18, chart on special diets)

Garnishes--sprigs of parsley, strips of pimento or green pepper and segments of fruit add contrast in color to a plate if they are permitted on the patient's diet. Remember, food is enjoyed first with the eyes. A small amount of well-prepared food, attractively served, may encourage a patient to even eat when he is not really hungry.

If the patient is able to feed himself, it may be best for him to eat alone. Sometimes, though, he may enjoy company. A schedule should be set up and meals and between meal snacks served on time. Irregular meals place a tax on the patient's disposition as well as his digestive system.

The patient should be made comfortable before the meal is served so he can eat in a calm, relaxed atmosphere. He should never be hurried through his meal, but neither should he be given so much time with his meal that he becomes tired.

To Prepare a Tray

Be certain the tray used for serving the patient is large enough to avoid crowding of dishes, yet not so large that small servings of food look lost on it. A muffin pan makes a nearly spill-proof tray. A six-cup pan with shallow cups provides space for a glass, a favor or flower and servings of food. A small tray can be used for snacks.

Here are some tips to make the tray attractive and provide convenient food service:

1. Follow to standard rules for table setting.

2. Arrange serving dishes so that the patient can easily reach them.

3. Use pretty napkins, silverware, dishes and glasses. These should be kept spotless by cleaning. Always have a cover on the tray a brightly colored napkin or clean kitchen towel are appropriate.

4. Avoid stemmed glassware which will easily tip.

5. Add a fresh flower or a tray favor to stimulate the patient's interest at mealtime.

6. Give small servings of food attractively arranged on the plate to tempt the patient's appetite.

7. Cut toast, bread and meat in bite size pieces which are easy to handle without cutting.

8. Serve hot foods HOT and cold foods COLD. Foods may be kept warm by inverting a warmed cereal bowl over them while they are being brought to the sickroom. Cold foods may be refrigerated in their serving dishes for a time before serving.

9. Serve foods in courses to keep them at their proper temperatures.

Before you are ready to serve the patient there are a few things you can do to make his meal more enjoyable. Arrange the pillows on the back rest so that the patient can sit up comfortably. Three larger pillows may be arranged to give elevation to the head and shoulders. Place the first one parallel with the head of the bed. Place the other two over the first one to form an inverted "V", with the wide part under the patient's shoulders, and the crossed section under his head. If more than three pillows are needed to support the patient in a sitting position, a back rest should be used.

Equipment:

Backrest
Three average sized bed pillows
Two small pillows

Procedure:

1. Place the back rest against the head of the bed
2. Place an average-sized pillow on the backrest, lengthwise
3. Place two average sized pillows diagnally, crossing them at the top. They will need to be adjusted to support the shoulders
4. Place one small pillow under the patient's head, and the other at the small of the back.

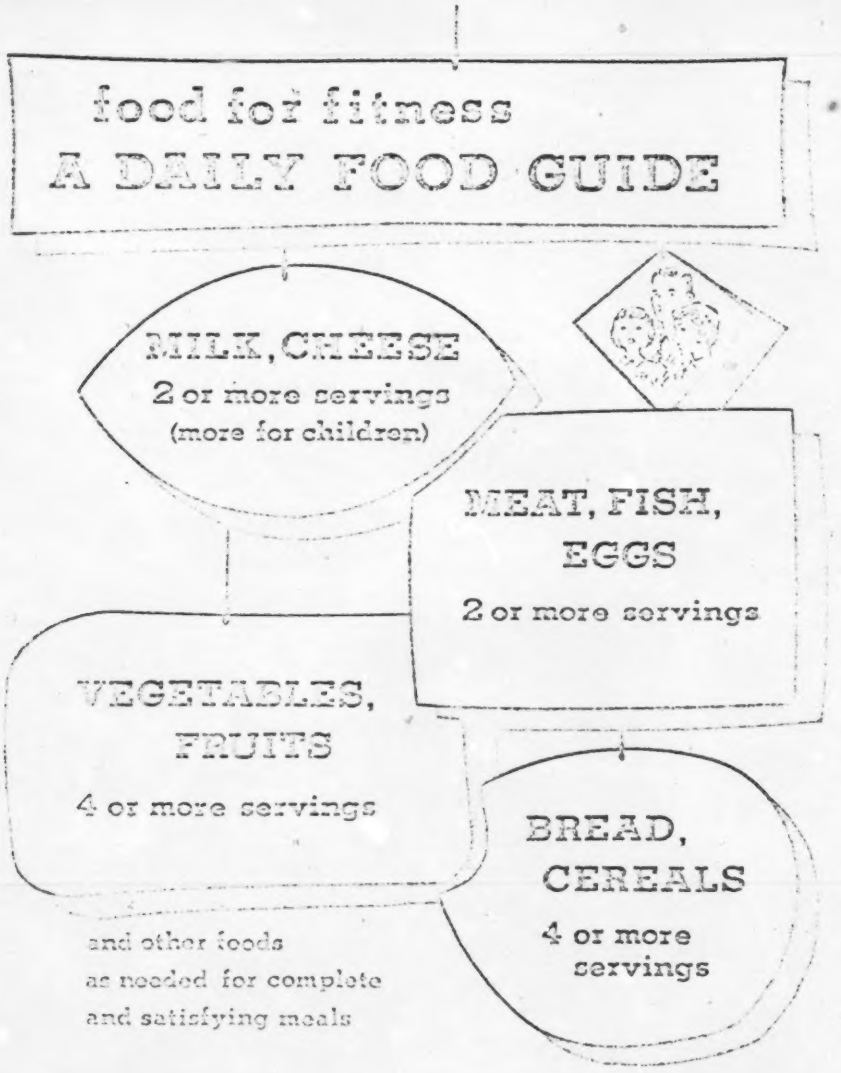
Help the patient wash his hands and face. Serve the tray as soon as the patient is ready, so that he will not become tired before his meal is over.

Remove the tray as soon as the patient has finished eating. Help the patient wash his hands and teeth. The patient may wish to lie down again, so offer to remove the pillows and backrest. You may also want to straighten the bed clothes to make the patient feel more comfortable.

LEARNING EXPERIENCE III

Self-Evaluation

1. What type of food needs particular attention in preparing it and why?
2. True or False. Most elderly patients require softer foods.
3. True or False. Foods served to the elderly should always be mildly seasoned and soft.
4. Name 3 garnishes that can be used on meal trays. What is the purpose of a garnish?
5. True or False. It is important to serve meals and snacks to patients according to a regular schedule.
6. List 5 "tips" to serving a patient an attractive meal tray.
7. Describe the proper positioning of pillows for supporting the patient prior to serving a meal.
8. Prepare a meal which would be appropriate to serve to an elderly patient in the home. Remember to adjust the seasoning levels to the "patient" likes (in this case, your own or your family's)
9. Practice planning meals for elderly patients. Plan menus for breakfast, lunch and dinner and snacks. Do they provide foods from each of the "Basic 4" groups? (Milk, Bread and cereal, Fruits and vegetables, Meats) Use the "Basic 4" chart as a guide. (page 17.)
10. Practice setting a tray for a patient's meal.
11. Practice preparing a patient for a meal served in bed.
12. Make some meal tray favor for elderly patients. Some themes could be seasons, holidays or the patient's hobbies.
13. Using a cardboard carton, construct a bedrest. (page 19.)



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Family Diet	*Light Diet*	*Soft Diet*	*Full Liquid Diet*
Breakfast			
Sliced oranges	Sliced oranges	Orange juice	Orange juice
Cream of Wheat and top milk	Cream of Wheat and top milk	Cream of Wheat and top milk	Cream of Wheat thinned with milk to make gruel
Buttered toast (whole-grain or enriched bread)	Buttered toast (whole-grain or enriched bread)	Buttered toast (enriched white bread)	
Cocoa, coffee, tea	Cocoa, coffee, tea	Cocoa, coffee, tea	Milk, coffee, tea
10 AM		Milk	Milk
Lunch or Supper			
Egg salad sandwich (whole-grain or enriched bread)	Egg salad sandwich (whole-grain or enriched bread)	Buttered toast (enriched white bread)	
Potato soup	Potato soup	Potato soup (no onion)	Strained potato soup (no onion)
Baked apple	Baked apple	Baked apple (no skin or seeds)	Plain fruit-flavored gelatin with whipped cream
Milk	Milk	Milk	Milk
3 PM			
Milk and cookies	Milk and cookies	Egg-milk drink	Egg-milk drink
Dinner			
Meat loaf	Broiled meat patty	Broiled meat patty	Beef broth with strained cooked peas
Baked potato	Baked potato	Baked potato	
Creamed new peas	Creamed new peas	Creamed new peas	
Lettuce and tomato salad	Lettuce and tomato salad	Tomato juice	Tomato juice
Corn meal muffins and butter	Bread and butter (whole-grain or enriched bread)	Enriched white bread and butter	
Orange sherbet	Orange sherbet	Orange sherbet	Orange sherbet
Sponge cake	Sponge cake		
Milk, coffee, tea	Milk, coffee, tea	Milk, coffee, tea	Milk, coffee, tea
8 PM		Milk shake	Milk shake

Back Rest

When a patient is able to sit up in bed, a firm back rest against which pillows can be arranged--gives greater support than pillows alone. Back rests can be purchased, or made at home from materials or furniture already on hand.

TO MAKE A BACK REST FROM A CARTON

Find a cardboard carton with the top cover on. It should be at least 9 by 12 by 15 inches in size.

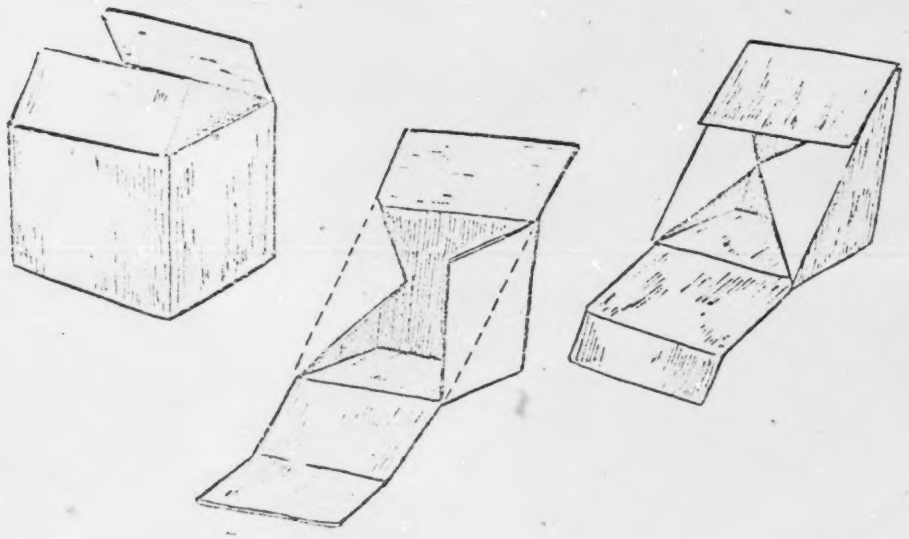
Open the top. Cut one end open at both sides as illustrated.

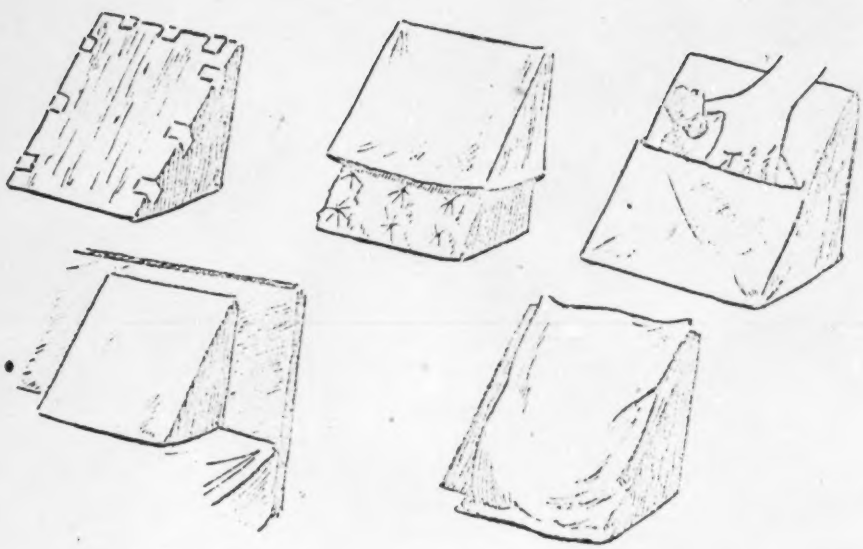
Score and bend the side sections to the inside, as shown by the dotted lines.

Turn the top flap down, and the long side and flap up over the folded sides.

Fasten flaps in place with gummed tape.

Make a washable slip cover from an old sheet or from attractive upholstery material. The back rest may be padded first with cotton or with quilted mattress padding. Arrange pillows against it.





LEARNING EXPERIENCE IV

Body Mechanics and the Care of the Elderly

Concepts:

- body mechanics principles
- the relationship between using the body efficiently and abilities in patient care

Generalization:

When the home nurse uses her body efficiently with body mechanics principles, she increases her ability to care for patients.

Instructional Objectives:

Upon completion of this learning experience the student will be able to:

1. Define the term "body mechanics"
2. Describe the basic principles of body mechanics the Home Health Management Assistant should use in home nursing
3. Describe the importance of posture in using the body efficiently
4. Identify the proper muscles to use in performing certain tasks
5. List six important guidelines which the home nurse should remember when caring for patients in the home
6. Recognize tasks performed by the elderly themselves which could be made easier by using body mechanics
7. Describe ways of instructing the elderly in the practice of body mechanics

Terminal Objective:

Upon completion of this learning experience, the student will be able to understand and apply the basic principles of body mechanics to home nursing practices and patient care.

Learning Activities:

Read the information sheet on "Body Mechanics and the Care of the Elderly" on pages 23 to 25.

Review: Introduction to Medical Physics, "Body Mechanics", Pages 34-43.

INFORMATION SHEET ON BODY MECHANICS AND THE CARE OF THE ELDERLY

This unit will present some basic principles of body mechanics which should be helpful to the home nurse in his or her daily activities. As the home nurse practices good body mechanics, the ability to care for patients increases.

What are "body mechanics"? They are simply techniques of using the body efficiently as a machine. Improper use of the body in activities performed throughout the day, such as reaching, bending, stooping and lifting may not only lead to feeling overly tired, but may also lead to aches, pains and injuries.

The first step in understanding body mechanics is to consider posture. Posture means the alignment of all body parts and is essential in all positions; stand, sitting, or bending. Posture involves maintaining balance. To balance the body and maintain good alignment in standing positions, to perform activities such as lifting, stooping, pushing and pulling, require much more effort than simply sitting. Gravity is the reason for the need for this extra effort. Keeping this point in mind will be helpful in nursing care, both in performing nursing functions and in helping and understanding the elderly patient's situation and problems.

One of the most important factors in body mechanics is using the longest, and strongest muscles of the body to do the work. Using the longest and strongest muscles of the arms and legs in lifting or moving patients or objects is as much a protective measure as it is an efficient practice, as it helps protect back muscles from excessive strain.

Here are some important guides, based on laws of physics, which the Home Health Management Assistant should remember when home nursing:

1. Push, pull, slide or roll an object on a surface rather than lift it. Remember, lifting involves overcoming the total pull of gravity.

2. Work as close to an object as possible when lifting or moving it. This brings the center of gravity of the body close to the center of gravity of the object and helps make use of our large muscles.

3. Use the weight of your body as a force for pulling or pushing by rocking on your feet or falling forward or backward. This eases strain on arms and back.

4. Good posture and the proper use of muscles not only saves energy, but prevents injuries.

5. When lifting, flex the knees, NEVER BEND AT THE WAIST, and use the thigh muscles to stand and lift, NOT THE BACK MUSCLES.

Remembering and using these concepts in dealing with elderly patients confined to their bed or those up and about will make your job easier and more enjoyable. Relaying these concepts to your elderly patients may also help them prevent injuries and allow them more mobility. This is all a part of caring for and about our patients.

LEARNING EXPERIENCE IV

Self-Evaluation

1. Define the term "body mechanics"

2. Why is posture important in using the body efficiently?

3. What muscles should do most of the work when lifting a heavy box from the floor?

4. List six important guidelines the home nurse should remember when caring for elderly patients in the home dealing with body mechanics.

5. What would be the easier method for an elderly person to move a chair across a room lifing it or pushing it? Why? Describe how you would instruct the elderly person in this method of moving objects?

6. Take each of the six guides for nursing care and test them.
   A) Try lifting a chair and then sliding it.
   B) Lift several books from a table with the arms extended, and then lift them with the arms close to your side and your body near the table.
   C) Open a sliding glass door or closet door by standing alongside it (Not facing it) place your hand in the door and rock back to open it. Then, try opening it with your arm strength alone while facing the door.
   D) Lift a stack of books from the floor by bending at the waist with extended arms and unbent knees. Now, stoop with bent knees with the stack and stand, using your thigh muscles and keeping your back straight.

7. Note how friends or family members use their bodies efficiently or inefficiently. Think of ways to improve their body mechanics and make some suggestions to them. Be sure to include a description of the benefits of using the body efficiently.

8. Sit in a low, soft chair or sofa. Stand up. Note what muscles you use and the amount of effort it took. Sit in a higher chair. Stand and note the muscles you used and the amount of effort it took. Compare the two exercises. Which chair would an elderly person find easier to use. What adaptations can you suggest for making it easier for an elderly person to rise from a chair.

9. Practice instructing patients in body mechanics techniques using friend, family members, or classmates.

Home Nursing for the Elderly

FINAL EVALUATION

1. List the five basic human needs.

2. Explain how the Home Health Management Assistant can help the elderly patient satisfy his or her nutritional needs.

3. List 4 physical needs, other than nutritional needs, the Home Health Management Assistant should help the elderly patient satisfy.

4. Name 6 things to include on a tray given to a patient to care for his mouth and teeth.

5. List 3 things to include on a tray given to a patient to wash his face and hands.

6. If the elderly patient you are caring for requires a soft diet, name 3 foods you might serve for lunch.

7. How should the Home Health Management Assistant decide what foods should be prepared for her patients meals and snacks.

8. List 5 "tips" to serving an attractive meal tray.

9. What muscles should do most of the work when lifting a heavy box from the floor? Why these muscles?

10. What is the foundation upon which all home nursing activities should be based?

SELF-EVALUATION ANSWER SHEET LEARNING EXPERIENCE #1

1. a. physical needs
   b. need for safety and security
   c. need to love and belonging
   d. need for self-worth and self-respect
   e. need for self-realization

2. See page 3, Basic Physical Needs

3. a. need for fluids
   b. need for regular elimination
   c. need for activity

4. lack of adequate fluid intake

5. a. fluids often not readily available
   b. make fluids available at all times

6. a. provide healthy foods (especially vegetable and fruit)
   b. encourage exercise

7. a. backrub
   b. snack
   c. warm drink
   d. short conversation

8. a. physical needs
   b. self-worth needs

9. to be evaluated by instructor

10. to be evaluated by instructor

SELF-EVALUATION ANSWER SHEET LEARNING EXPERIENCE #2

1. a. follow the patient's personal schedule
   b. encourage the patient to do as much for himself as possible
   c. demonstrate skill and efficiency in nursing care

2. a. toothbrush
   b. toothpaste or powder
   c. prepared mouthwash
   d. small basin
   e. glass of fresh water
   f. bath towel
   g. damp washcloth or facial tissue
   h. lubricant for lips

3. a. wash basin--warm water
   b. mild soap
   c. hand lotion
   d. face cream
   e. bath towel
   f. washcloth
   g. face towel

4. see page 9 and 10

5. a. physical
   b. security and safety
   c. self-worth
   d. belongingness

6. to be evaluated by instructor

7. to be evaluated by instructor

8. to be evaluated by instructor

SELF-EVALUATION ANSWER SHEET LEARNING EXPERIENCE #3

1. Vegetables,--because they are often over-cooked
2. True
3. False--not always. Base seasonings and textures on the individual patient's needs and likes
4. Parsley, carrots, green peppers, lemon wedges
5. True
6. See page 13-14
7. See page 14
8. To be evaluated by the instructor
9. To be evaluated by the instructor
10. To be evaluated by the instructor
11. To be evaluated by the instructor
12. To be evaluated by the instructor
13. To be evaluated by the instructor

SELF-EVALUATION ANSWER SHEET LEARNING EXPERIENCE #4

1. Simple techniques of using the body efficiently
2. To maintain balance and reduce fatigue
3. Thigh muscles
4. See page 22-23
5. To be evaluated by instructor
6. To be evaluated by instructor
7. To be evaluated by instructor
8. To be evaluated by instructor
9. To be evaluated by instructor

FINAL EVALUATION ANSWER SHEET

1. a. physical needs
   b. need for safety, security
   c. need for love and belonging
   d. need for self-worth and self-respect
   e. need for self-realization

2. to be evaluated by instructor

3. a. need for fluids
   b. need for regular elimination
   c. need for activity

4. a. toothbrush
   b. toothpaste or powder
   c. prepared mouthwash
   d. small basin
   e. glass of fresh water
   f. bath towel
   g. damp washcloth or facial tissue
   h. lubricant for lips

5. a. wash basin--warm water
   b. mild soap
   c. hand lotion
   d. face cream
   e. bath towel
   f. wash cloth
   g. face towel

6. to be evaluated by instructor

7. according to the needs and likes of the individual patient

8. see pages 13 and 14

9. The thigh muscles because they are long and strong

10. A feeling of caring <u>for</u> and caring <u>about</u> your patients

THE FOLLOWING BOOKS WERE USED AS REFERENCES IN COMPILING THIS MODULE

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